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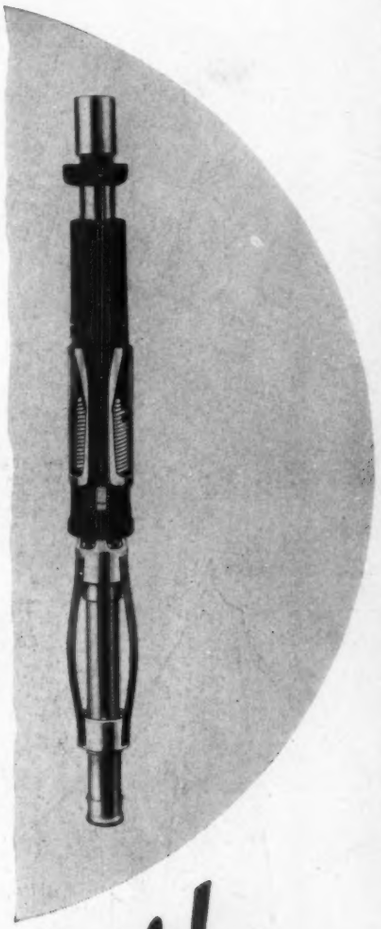

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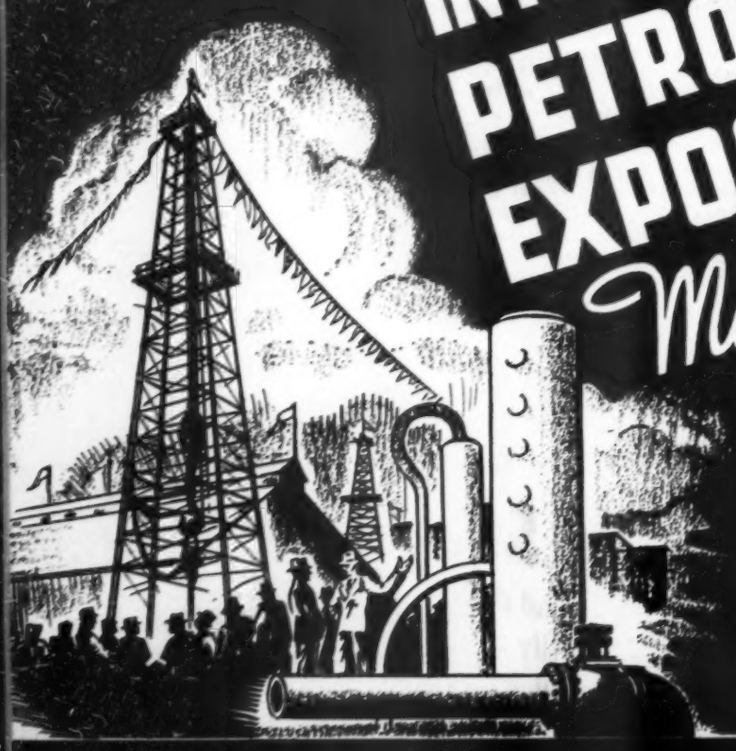

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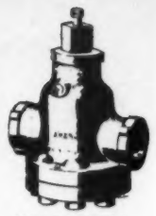

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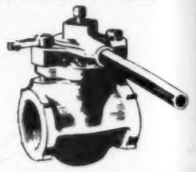

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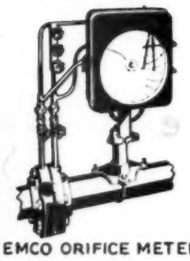

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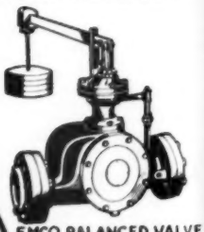

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May Is To Be Test Month in Operations

AS MAY opened it was anticipated it will be a test month which will determine the soundness of present operations in the oil industry. The recent increases in crude oil production and expansion in refinery operations have been justified by many operators on the assumption that May which marks the start of the main gasoline consuming season would bring substantial gains in demand that would provide outlets for current gasoline output and assure a steady reduction in the admittedly heavy inventories.

On the producing side average daily production over the past week dropped 23,000 barrels daily, but there was nothing to indicate permanent narrowing of the wide spread between current output and requirements as estimated by the Bureau of Mines and the representatives of the industry. Despite this situation there has been no alarming increase in crude stocks in any area.

In the gasoline end the week brought improvement in the retail marketing situation at several points in the East where prices have been from 1 to 4 cents below normal with tankcar prices generally steady throughout the country. A reduction in the Canadian gasoline import tax from 2½ to 1 cent per imperial gallon is expected to increase shipments from this country.

No 1 Banks Geyer, the first producing well to be completed north of the city limits in the extension pool of Oklahoma City, provides a one-fourth mile northwest extension to the proven area. The completion assures that operators will start drilling in the immediate future on 40 locations in that area.

Simpson & Noble and others have apparently opened a new pool in Barton County, Kansas, in No. 1 Hiss in section 31-20-13w. The well, which is 6 miles south of Great Bend, was completed at a depth of 3,287 feet.

Production 2,918,641
Decrease 23,011

Principal interest in the Rodessa development centers in extension tests in Cass County, Texas. No. 1 Rambo of American Liberty Oil Co. will provide a 4-mile extension to the southwest if completed a commercial producer. Interest in the test of Phillips Petroleum Co. in northeast flank of the Smackover pool, Southern Arkansas, which is showing a large gas production with a small amount of distillate is indicated in the purchase of acreage in that section.

The Kermit area in Winkler County and a 1½-mile northwest extension to the Odessa pool in Ector were the important developments in West Texas. A new field to be known as Bentonville in eastern Jim Wells County has been definitely opened in Southwest Texas. A large well has been completed on the northeast flank of the Hobbs pool in New Mexico.

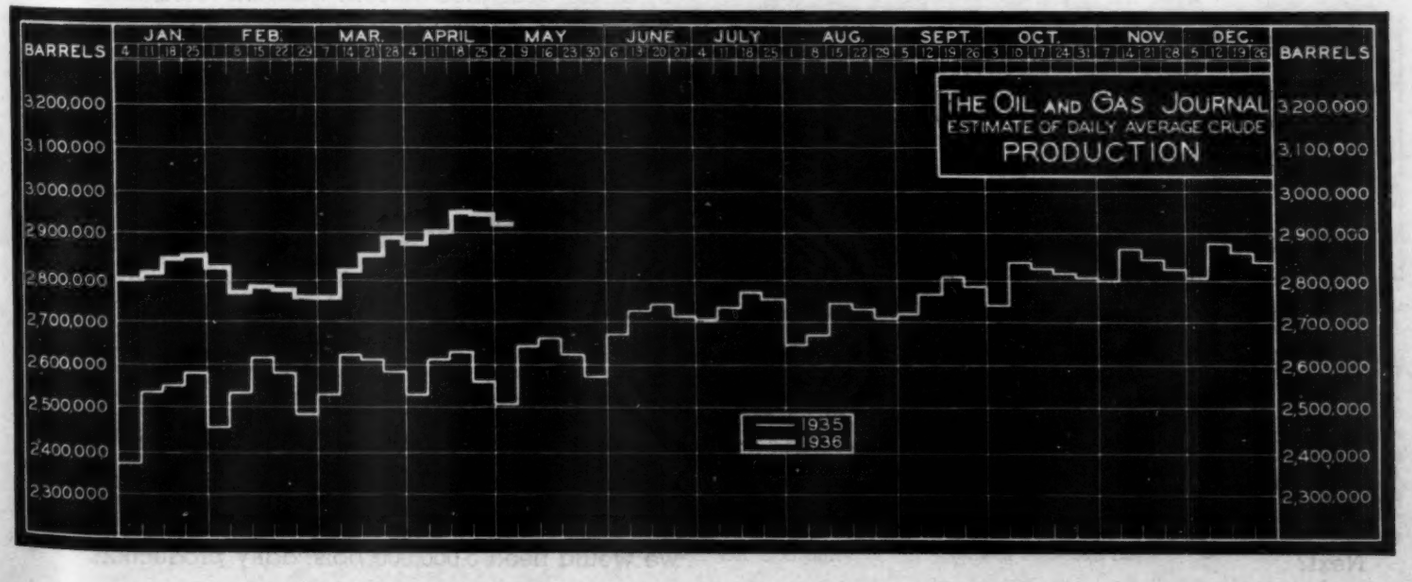
Daily Average Production for Week

	May 2 1936	April 25 1936	May 4 1935
Oklahoma City	121,200	149,300	116,150
Seminole-St. Louis	103,900	104,900	91,125
Remainder State	306,900	302,900	251,300
Total Oklahoma	532,000	557,100	458,575
East Texas	455,857	452,424	466,953
West Texas	181,296	180,797	151,210
North Central Texas	84,545	84,452	82,155
Texas Panhandle	66,150	64,000	55,120
East Central Texas	50,348	50,850	48,210
Gulf Coast Texas	246,695	248,297	179,910
Southwest Texas	80,579	79,446	62,273
Total Texas	1,165,470	1,160,266	1,045,831
North Louisiana	70,340	68,315	23,365
Gulf Coast Louisiana	145,597	145,687	105,653
Total Louisiana	215,937	214,002	129,018
Santa Fe Springs	42,750	43,500	36,000
Long Beach	66,800	67,500	58,500
Mountain View	26,700	25,600	10,250
Kettleman Hills	79,800	77,500	41,000
Remainder of State	345,450	353,800	306,750
Total California	561,500	567,900	452,500
Kansas	162,625	159,075	144,725
Arkansas	30,075	29,830	31,510
Eastern Fields	104,500	108,500	106,500
Michigan	33,654	32,289	40,019
Rocky Mountain area	112,880	112,690	100,960
Total United States	2,918,641	2,941,652	2,509,638

Crude Oil Stocks in U. S.

(BUREAU OF MINES ESTIMATES)

Week ending April 18, 1936	313,045,000
Week ending April 11, 1936	311,837,000
Week ending April 20, 1935	341,445,000



SPARKS FROM THE NEWS

Mystery

If gasoline is backing up at Gulf ports who is supplying the export market?

Exodus

Staggering the Madison subpenas through the summer may leave enough oil men at home to run the industry.

Flaw

Tax dispersal of surplus may force industry to borrow for expansion giving bankers control, says President Seubert. Has congress considered that?

Truck

Oil executives can aid gasoline consumption by insisting those tons of records be shipped to Madison, Wis., by truck.

Proof

That $4,500,000 California extension shows saturation point has not been reached in major pipe line construction.

Sensation

The real news will be when Louisiana accepts invitation of Texas to joint action on Rodessa.

Contrast

Oil industry taxes — $1,127,000,000 — exceeded value of all crude produced last year—$975,000,000. Yet some talk of gasoline price!

Escalator

Fifty-city retail gasoline price advanced .42 cent in April to 14.29 cents May 1, highest since January, 1934. Slow but steady.

Kick

Gasoline tax in New York will be reduced from 4 to 3 cents July 1 because New Yorkers protested. Next?

Mileage

Discovery of oil field in Central Siberia suggests real pipe line job in either direction.

Insurance

Safe driving campaigns by automotive and oil companies may keep their customers alive.

Roundhouse

Ohioan's suggested eight-lane transcontinental motor highway cannot expect much railroad support.

$42,500,000

will be spent by Standard of Indiana in 1936 expansion program. Other large firms planning likewise. Man, what buying power!

Ordeal

Increased drilling activity everywhere gives proration authorities test-by-fire. And each new field steps up the heat.

Brief-Mansion!

War bulletin from Oklahoma City's Mansion Sector: Latest decision means unrestricted drilling. Active operations? Nearly 200. Life of mansions? Like unto the grass!

"Floodtide"

alone describes current gasoline consumption. Figures not available; incidental evidence is beyond question. Genuine banner year in the making!

Demonstration

Do orderly markets pay? Note oil companies' brilliant first-quarter earnings. California, the exception, reflects disturbed gasoline prices for much of period.

Climax

Michigan independent refiners want 35,000 bbls. daily crude production doubled so they can operate to capacity. If all refiners operated at capacity we would need 5,000,000 bbls. daily production.

Shell Co. to Spend $4,500,000 on Pipe Line to San Francisco

By L. P. STOCKMAN

LOS ANGELES, Calif., May 4.—Shell Oil Co. has completed plans for a new crude oil pipe line which will extend from Bakersfield in Kern County to the company's Martinez refinery on San Francisco Bay and connect San Joaquin Valley fields with tidewater in the north. This new line will be 304 miles long and constitute the biggest pipe line job undertaken in California within 25 years.

Actual construction will be undertaken within another 60 days, although some preliminary work will be started within another few weeks. It will require an expenditure of $4,500,000, and tentative plans call for completion within six months after the awarding of construction contracts.

As has been done in recent projects, the Shell will purchase the pipe for its own account and string a substantial part of it along the rights of way but will leave the ditching and welding and other details to construction contractors. Stringent specifications have been prepared. Electric welding will be required throughout. The pipe will be routed to several central points from which distribution will be made direct to the right of way. Distributing points will be at Bakersfield and Delano in Kern County, Coalinga in Fresno County, Los Banos in Merced County, Westley in Stanislaus County, Tracy in San Joaquin County, and Martinez in Contra Costa County.

One section of this new pipe line, from Bakersfield to Caliola, southern terminus of the Shell's present pipe line and about 10 miles northeast of Coalinga, will consist of 90 miles of 10-inch line. The second section, extending from Caliola to Martinez, will consist of 170 miles of 10-inch pipe. Gathering lines from Mount Poso, Round Mountain, Edison and Mountain View will be 44 miles in length and consist primarily of 6- and 8-inch pipe. Outside of each pump station the pipe lines will consist of 12-inch pipe in order to equalize pump pressures, but for the most part the line will consist of 10-inch pipe. Four sizes of pipe will be used along the line and the diameter will range between 6 and 12 inches.

New Tankage

In addition to constructing this new line, the Shell will construct 250,000 of new steel tankage at Bakersfield and a similar amount at Coalinga in order to differentiate between light and heavy oil, as both grades must be moved between these points. Pumping plant facilities will have to be revamped and present plans call for the modernizing of all existing pump stations and the construction of additional stations. Four new pump stations will be erected along the 90-mile stretch between Bakersfield and Coalinga to facilitate the dispatch of heavy crude oil. Pumping equipment to be installed will be of the most advanced and modern type with operating pressures approximating 1,000 pounds between Bakersfield in Kern County and Coalinga and about 800 pounds from Coalinga to Martinez. In addition to the four new pump stations to be erected between Bakersfield and Coalinga, present plans call for the re-equipment and modernizing of pump stations between Coalinga and Martinez in order to handle the increased flow of oil.

The new line will handle about 25,000 bbls. per day from Bakersfield to Coalinga and with existing facilities will be capable of moving approximately 45,000 bbls. of light and heavy oil daily to the Martinez refinery. Shell's pipe line facilities at the present time do not extend south of Coalinga and as a consequence Union Oil Co. has been moving a large part of Shell's production from southern San Joaquin Basin fields to Coalinga, where it is delivered to the Shell company pipe line. In some cases Union Oil Co. has moved this oil to the sea coast at Port San Luis, from whence it is moved to either Martinez on San Francisco Bay or to Los Angeles harbor, where Shell has adjacent refineries at Watson and Dominguez.

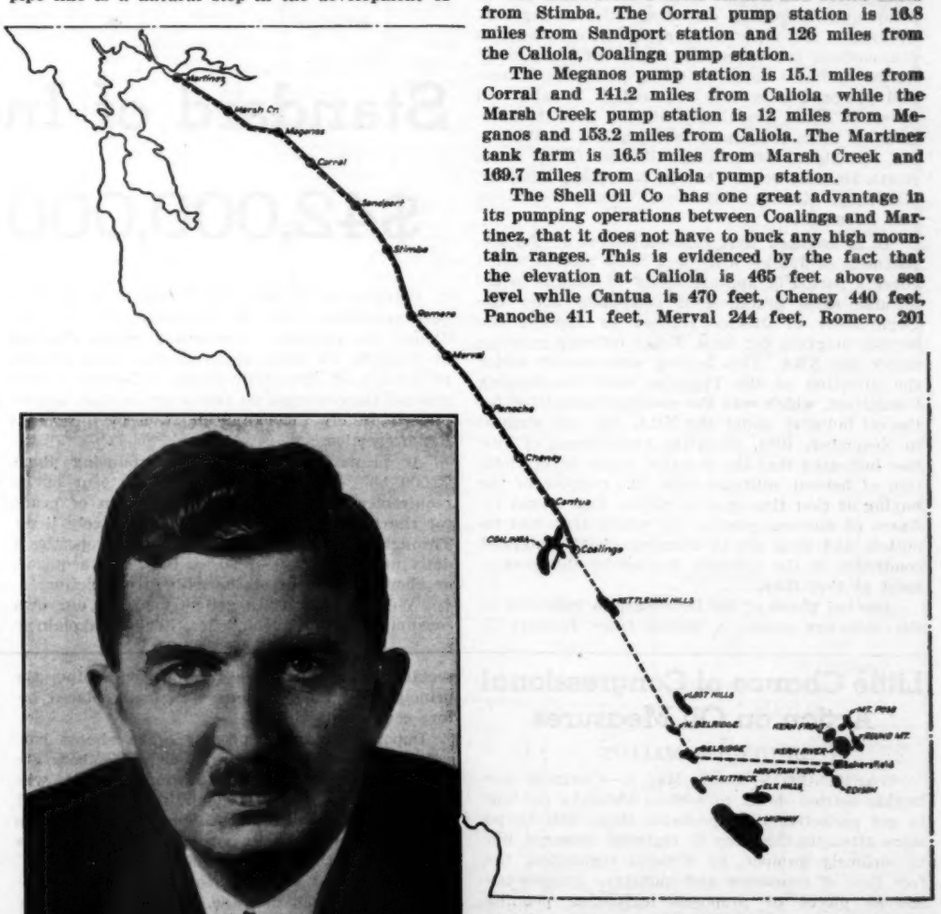
Many engineers have been surprised, in view of this arrangement, that Shell would expend $4,500,000 for construction of a new pipe line, but President Belither states that "Confidence in the future is the basis for our decision to begin a major project at this time, because Shell believes the Pacific Coast is entering a period of steady economic progress and that the oil industry will expand and develop in proportion to the growth of other business and the coast's population. The new pipe line is a natural step in the development of the Shell organization, as it will provide transportation for crude oil at maximum efficiency and low cost."

The Cantua pump station is 15.2 miles from Caliola, the Coalinga pump station, and has an elevation of 470 feet compared with an elevation of 465 feet at Caliola. The Cheney pump station has an elevation of 440 feet and is 15½ miles from Cantua and 30.7 miles from Caliola. The Panoche pump station is 15.7 miles from Cheney and 46.4 miles from Caliola while the Merval pump station is 17.4 miles from Panoche and 63.8 miles from Caliola. The Romero pump station is 15.8 miles from Merval and 79.6 miles from the Caliola pump station at Coalinga. The Stimba station is 15.2 miles from Romero station and 94.2 miles from Coalinga while the Sandport station is 14.5 miles from Stimba station and 109.03 miles from Stimba. The Corral pump station is 16.8 miles from Sandport station and 126 miles from the Caliola, Coalinga pump station.

The Meganos pump station is 15.1 miles from Corral and 141.2 miles from Caliola while the Marsh Creek pump station is 12 miles from Meganos and 153.2 miles from Caliola. The Martinez tank farm is 16.5 miles from Marsh Creek and 169.7 miles from Caliola pump station.

The Shell Oil Co has one great advantage in its pumping operations between Coalinga and Martinez, that it does not have to buck any high mountain ranges. This is evidenced by the fact that the elevation at Caliola is 465 feet above sea level while Cantua is 470 feet, Cheney 440 feet, Panoche 411 feet, Merval 244 feet, Romero 201 feet, Stimba 196 feet, Sandport 246 feet, Corral 143 feet, Meganos 184 feet, Marsh Creek 621 feet, and Martinez 65 feet.

The terminal of the Shell's valley pipe line terminates at the Martinez refinery located on San Francisco Bay, but the apparent discrepancy in elevation is due to the fact that the company's refinery and tank farm are on high ground whereas the loading line is at tidewater on a tributary of San Francisco Bay.



Crude oil lines of Shell Oil Co. in California. Existing line, solid line; new, broken line

S. BELITHER
President Shell Oil Company

Tons of Oil Company Records to Be Presented Before Jury

An accumulation of oil company records which will total several tons during the next few weeks is indicated in reports from Madison, Wis., where a special federal grand jury convened on Monday, May 4, to investigate alleged unfair trade practices of the marketing branch of the oil industry. The taking of testimony in the investigation announced from Washington, D. C., last month by Attorney General Homer S. Cummings, starts this week and will continue indefinitely.

Subpenas have been served calling for the delivery of records of a large number of oil companies operating in the Middle West and Southwest. Representatives of oil trade publications, associations, brokerage organizations and individual operators have also been served with subpenas to appear over a period which extends to the latter part of June.

In the case of major oil companies special rail or truck shipments will be required to deliver the company records requested by the grand jury. One period covered in some of the subpenas extends from November 10, 1934, to April 30, 1936. Original books, records, contracts and invoices showing purchases of gasoline from a large number of companies as well as copies of letters, telegrams, documents and memoranda applying to these sales transactions are requested. Other information required includes dates of sales, quantities, grades and prices. The records required, it is said, will cover in detail practically all the sales transactions of these companies in the states of Wisconsin, Michigan, Minnesota, Illinois, Ohio, Iowa, North Dakota, South Dakota, Nebraska, Missouri, Kentucky, Kansas, Oklahoma, Texas, Louisiana and Arkansas.

It is assumed that representatives of the Department of Justice will check these records which cover a period of approximately 18 months to determine sales practices of companies after the Department of Justice refused to approve the buying program for East Texas refinery gasoline under the NRA. This buying was carried under the direction of the Planning and Coordinating Committee, which was the steering committee for the oil industry under the NRA, but was stopped in November, 1934, when the Department of Justice indicated that the practice might be in violation of federal antitrust acts. The purpose of the buying at that time was to relieve East Texas refiners of distress gasoline for which they had no outlets and thus aid in bringing about stabilized conditions in the industry desired by the government at that time.

Another phase of the investigation indicated in the subpenas covers a period from January 1, 1931, to April 30, 1936. This calls for the delivery at Madison of all company records having to do with gross and net margins and other agreements with jobbers, brokers, wholesalers, tankcar operators, bulk plant operators, service station operators and other handlers of motor fuels. One of the reasons assigned for the investigation when announced at Washington had to do with complaints of national jobbing organizations regarding the reduction of margins allowed jobbers and retailers. Trade journals and associations will be required to present all records which have to do with this phase of the investigation which also covers the alleged price fixing angle.

Still another phase of the investigation reflected in the request for complete records is concerned with intercompany transactions covering crude oil and semirefined crude.

Four special aides in the attorney general's department and several investigators from the Department of Justice have been assigned to the Madison grand jury. John J. Boyle is the U. S. District Attorney for the Western Wisconsin district where the investigation is under way. Twenty-three jurors were sworn in last week.

SHIPPING ASPHALT

Loading wharf at Mexican port

◆ ◆ ◆ ◆

Standard of Indiana to Spend $42,000,000 for Expansion

CHICAGO, Ill., May 4.—President E. G. Seubert announces that the Standard Oil Co. (Indiana) has planned a vigorous program, directed at bringing its crude oil production to a greater proportion of its requirements, following a substantial improvement on this score in 1935, accomplished largely through acquisition of the Yount Lee properties.

At present the company is producing about 72,000 bbls. a day, or about 38 per cent of its requirements a year ago. Consumption of crude for the two periods has changed relatively little. Through acquisition of the Yount Lee properties a daily net production of 20,000 bbls. was acquired, or about 9 per cent of the gain in production.

"We are anxious to get as much of our own consumption as we can," Mr. Seubert explained. "We would be happy if we had 50 per cent and that is what we are working for, although we might not stop there."

About $16,000,000 will be spent for drilling and other expansions in the producing end, compared with from $12,000,000 to $15,000,000 last year.

Principal other items in the budget are about $10,000,000 in the manufacturing division, of which the main addition will be to the Texas City refinery. Expenditures for construction and improvement in the manufacturing division during 1935 were about $4,000,000 to $5,000,000.

Pipe line construction expenditure will total about $3,500,000; $7,000,000 for additional water transportation, including four new tankers; and $6,000,000 on market development.

Little Chance of Congressional Action on Oil Measures

By HUGH D. MALLON

WASHINGTON, D. C., May 4.—Congress now having settled down to serious thinking on how to get reelected, it is probable there will be no more attempts this year to regiment business, nor to seriously hamper, by Federal regulation, the free flow of commerce and industry. Despite numerous pieces of proposed legislation pending which have as their aim regulation of various phases of industry, it is not expected many, if any, will be passed at this session.

Directly affecting the oil industry are proposals seeking to limit imports of petroleum and products, as well as to lay an increased excise tax on importations of both products and crude, a measure designed to force blending of gasoline and alcohol, and a legislative proposal that the natural gas industry, including natural gas pipe lines, be subjected to Federal regulation.

Aside from these three are numerous proposals to amend the antitrust laws, while suggestions seeking to reestablish, in one form or another the principles of the NRA are still being placed before congress.

Import limitations proposals are almost conceded to be dead for this session. Members are fearful if the import limitation feature was brought up for the petroleum industry it would open the flood-gates for appeals by other industries for protection through import limitations. This would extend the session indefinitely.

The proposed legislation calling for the blending of alcohol and gasoline, sponsored by Representative Lea of California and backed by the Chemical Foundation, as well as other chemical and farm organizations, is still in committee and further hearings are expected when four witnesses in favor of the bill will be heard: Fred Brinckman of the Farmers Grange; Leo Christensen of the Chemical Foundation; G. W. Jones of the Cleveland Tractor Co.; and Dr. O. C. Bridgman, chief of the Division of Heat and Fuel at the National Bureau of Standards.

It is probable this bill will be lost in the shuffle as several members of the subcommittee conducting the hearings are opposed to it. This opposition is being led by Representative William P. Cole, who is aware the use of the blend would result in higher prices for motor fuel, while producing an inferior grade.

Numerous suggestions aimed at amending the antitrust laws are almost on the point of being discarded. About the only one having a chance at this session is the so-called "chain store" bill sponsored by Senator Robinson and Representative Patman. Since so many bills aimed at the giving of quantity discounts and preferential prices have been introduced, there is a good possibility this legislation may be held over until next session to straighten out differences of opinion evidenced by the different bills.

The Walsh "government contract law," passed by the Senate and pending in the House, has been definitely tabled by the House Judiciary Committee. A substitute for this by Representative Healy has met the same fate.

The most serious threat is the pending tax proposal. It is expected the Senate Finance Committee will greatly simplify the provisions, but there is almost no hope of blocking the enactment of a tax law designed to force distribution of profits.

Extend Rodessa Producing Structure Deeper Into Cass County, Texas

By H. S. NORMAN

SHREVEPORT, La., May 5.—Recompletion of Phillips Petroleum Co.'s Permian lime discovery well northeast of the Smackover pool in Ouachita County, Ark., and a 4½-mile southwestern extension for the Rodessa producing structure deeper into Cass County served last week to stimulate exploration for deep oil and gas in Northern Louisiana and Southern Arkansas.

On recompletion, the Phillips deep discovery produced 14,000,000 feet of gas per day and 20 bbls. of distillate the first hour. During the last of a four-hour gauge on the well distillate production declined to 6½ bbls. Production was made through half-inch choke on 2-inch tubing from 7 to 11 p.m. May 3. At the end of the four-hour gauge the well was shut in and operators will set separator and erect additional storage. The distillate gravity is from 51 to 53 degrees.

Meanwhile, much concern is expressed over failure of the Louisiana Department of Conservation to trim the Rodessa per well allowable of 350 bbls. per day during May. While Governor Noe's administration terminates May 12, rumors are current that Bob Maestri of New Orleans is slated to continue as head of the Louisiana Conservation Department, and that little change in the personnel of this organization is contemplated when Richard W. Leche becomes governor.

Leche's Oil Representative

In preparation for taking over administration of Louisiana's affairs, Governer-elect Leche has appointed O. A. Daegle, formerly affiliated with Humble Oil & Refining Co. in Texas, as his personal oil representative. Mr. Daegle is now gathering data on all phases of the Louisiana oil business and is attempting to correlate his finds with conditions existing in neighboring states.

A majority of Louisiana oil men, that is to say the producers, refiners and rank and file of the business, appear to favor a firm state policy.

At a meeting of the Texas Petroleum Council recently in East Texas, Mr. Daegle revealed that he had been appointed oil representative for Governor-elect Leche and said the future chief Louisiana executive favors strict conservation. After explaining it was an unusual procedure to disclose the personnel of a state organization before it was actually created, Mr. Daegle told his audience he is attempting to familiarize himself thoroughly with various proration systems and their results.

Louisiana oil men are vitally interested in the economic welfare of the oil business, it is disclosed in informal conversations. Much of their interest in substantial and stable crude prices are based on the severance tax in Louisiana, which scales up to 11 cents per barrel for 40 gravity oil and higher grades. Without a reasonable market, Louisianans contend that exploration for and development of such pools as Rodessa and the projected deep wildcat campaign throughout the northwestern part of the state could not be possible. Likewise, the state is declared interested in the severance tax.

Rodessa Production

At the end of last week, Rodessa pool, including six wells on the Texas side, contained 155 producing wells each with allowable of 350 bbls. per day. Daily production at the end of the week averaged more than 52,000 bbls. and there are approximately 70 drilling operations of which 25 are within 300 feet of completion depth.

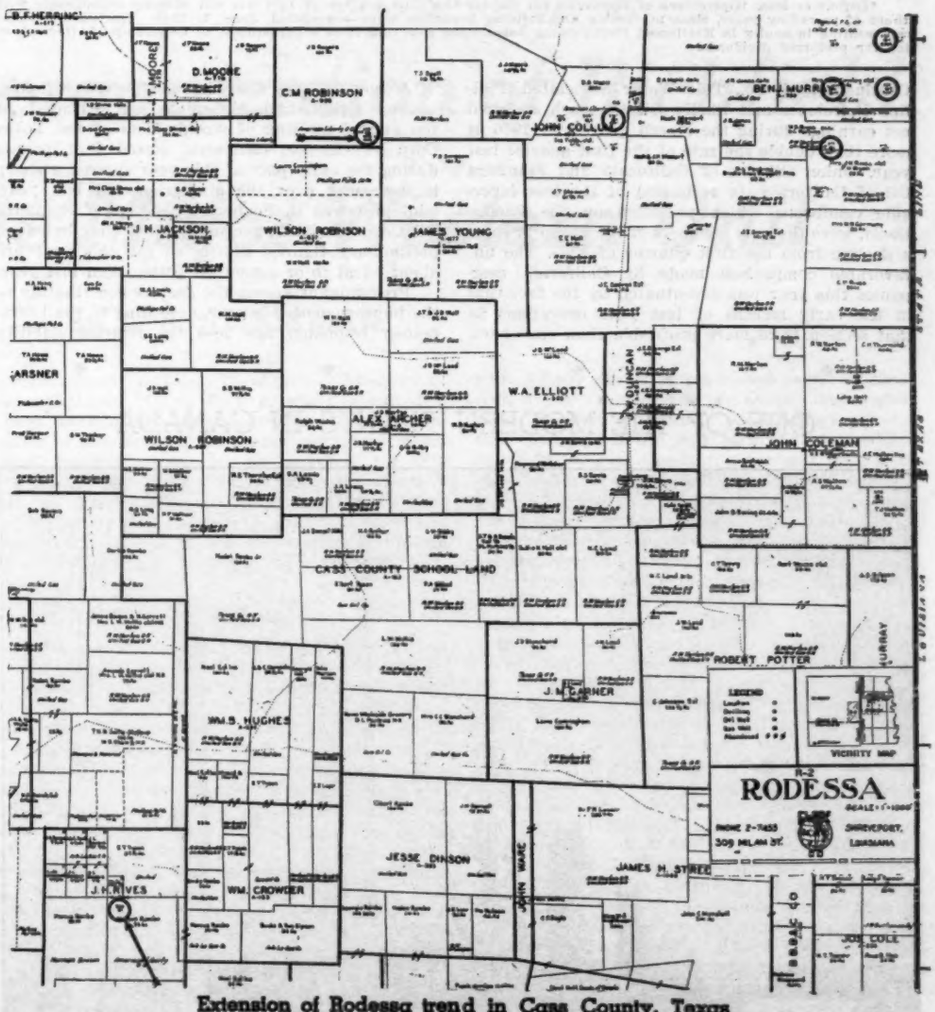
Indications are that the Rodessa pool will contain at least 180 completed producers by the end of May. With greater knowledge of formations and of equipment necessary to meet conditions, it is possible that the 200 well mark may be attained before May ends. Production of 70,000 bbls. per day from the Rodessa pool by the end of May is a distinct possibility unless a mid-month allowable reduction is made, a practice not adopted so far in Louisiana.

In the Louisiana Conservation Department's May proration order issued in New Orleans May 1, the state production for May was set at 212,725 bbls. daily, compared to 170,500 bbls. per day limit recommended by the Bureau of Mines. The state figure of 212,725 bbls. was broken down into 50,750 bbls. per day assigned to the Rodessa pool and 20,000 bbls. per day for other North Louisiana areas. Remainder of the state total was assigned to Southern Louisiana pools. By boosting the Rodessa pool's output 20,000 bbls., a distinct possibility by the end of May in view of the present development rate, it is more than likely that the state will be pushing 250,000 bbls. of oil per day onto the market by May 31. If these calculations are substantiated by drilling and unless curbed, the Louisiana production will be approximately 80,000 bbls. per day in excess of the Bureau of Mines calculated demand.

What probably constitutes an all time record price for Rodessa pool acreage, if full terms of the transactions are carried out, was paid and pledged last week in Caddo Parish, La.

Harold F. Young paid a total of $5,000 cash and agreed to drill two 6,000-foot wells on two acres, but acquired seven-eighths title to only one acre and a half interest in the other. Computing the cost of Rodessa wells at approximately $60,000 each, Young will have paid $125,000 for the two tracts, if the two wells are drilled.

Full working interest was assigned to Young by A. J. Lockett and others in the east half of the north two acres of a five-acre tract in the northeast corner of the southeast quarter of section 24-23-16 and the same parties assigned a half interest in the west half of the same tract. Section 24-23-16 is the first section due east of Rodessa Townsite. Three gas wells, two to the west and one north have been completed in the Hill sand, uppermost producing horizon in the Rodessa pool. Such terms as involved in the Young deal would be impossible under other than a flat per well allowable.



Extension of Rodessa trend in Cass County, Texas

Oil Company Earnings Are Up Approximately 100 Per Cent

The net income of 12 representative oil companies the first quarter of this year totaled $18,180,323, a gain of 100 per cent over the 1935 first quarter total of $9,006,745. The net earnings of these same companies the first quarter of 1934 were $8,625,347 and for same period in 1933 they had a combined deficit of $23,735,948.

Carl H. Pforzheimer & Co., New York, which compiled the accompanying table, point out that when firm gasoline markets in California contrasted with weakness east of the Rocky Mountains. However, during April, 1936, retail gasoline prices in California were restored to normal levels by advances totaling 4½ cents per gallon.

The following table shows first quarter total and per common share net income for the years 1933 to 1936 of the companies that have issued quarterly statements (quarters ended March 31):

	1936		1935 Net income	1935 ‡Per share	1934		1933 Net income	1933 ‡Per share
Atlantic Refining Co.	$1,933,000	$0.74	*$ 139,000	*$0.05	$ 613,000	$0.23	*$3,127,000	*$1.16
†Barnsdall Oil Co.	471,643	0.22	* 337,339	* 0.15	119,368	0.05	* 852,803	* 0.39
Continental Oil Co.	‡2,114,521	0.45	940,807	0.20	1,211,483	0.26	* 2,325,347	* 0.50
Mid-Continent Petroleum Corp.	942,659	0.51	* 273,057	* 0.15	310,030	0.17	* 1,469,929	* 0.79
Phillips Petroleum Corp.	2,156,159	0.76	1,542,335	0.37	726,125	0.17	* 2,179,621	* 0.52
Plymouth Oil Co.	361,156	0.34	185,833	0.18	210,314	0.21	7,787	0.01
Seaboard Oil Co.	612,126	0.49	439,177	0.35	368,219	0.30	290,809	0.24
Shell Union Oil Corp.	1,681,984	0.09	* 1,121,041	* 0.13	* 41,091	*0.05	* 9,239,550	* 0.75
Skelly Oil Co.	797,016	0.69	297,517	0.20	* 146,655	*0.26	* 1,282,679	* 1.41
Standard Oil of California	2,952,968	0.23	4,891,022	* 0.37	3,323,591	0.25	* 718,987	* 0.05
Tide Water Associated Oil	2,797,702	0.31	1,230,991	0.05	1,430,963	0.08	* 1,238,728	* 0.40
Union Oil of California	400,000	0.09	1,350,000	0.31	500,000	0.11	* 1,100,000	* 0.25

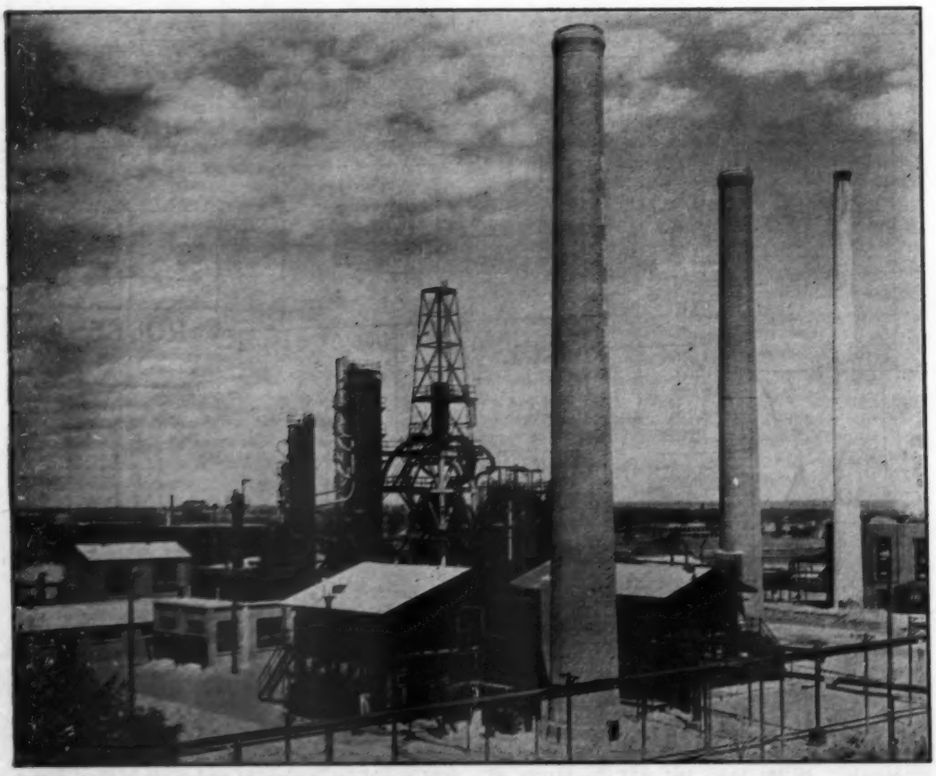
*Deficit or loss. †Operations of Barnsdall Oil Co. for the first quarter of 1936 are not directly comparable with those of preceding years, since marketing and refining branches were segregated June 1, 1935. ‡Includes $154,718 representing in equity in Kettleman North Dome Association resulting from readjustment of ownership. §After allowing for preferred dividends.

Continental Oil Co., Tide Water Associated, Phillips Petroleum and Skelly Oil Co. each reported net earnings during the March quarter of 1936 at more than double the rate of the first quarter last year. Union Oil Co. of California and Standard Oil of California, in reflection of the less favorable conditions which prevailed on the Pacific Coast, were the only members of the group to show a decline from the first quarter of 1935. The unfavorable comparison made by California companies this year was accentuated by the fact that in the early months of last year operations in that section were more profitable than elsewhere.

Although Texas Corp. has not published a first quarter report, higher earnings are indicated. At the annual meeting of stockholders of the Texas Corp., T. Rieber, chairman, stated that profits during the early part of this year showed a sharp improvement over the similar period last year, while Edward G. Seubert, president of Standard Oil Co. of Indiana, recently stated that based on preliminary figures, profits so far this year are about equal to or somewhat better than last year.

Predominant among the factors contributing to the improvement this year, according to the Pforzheimer company, has been the relative stability of gasoline prices as compared with the wide fluctuations characteristic of recent years. Service station prices, exclusive of taxes, in 50 representative cities throughout the country during the first three months of the current year averaged approximately three quarters of a cent higher than during the corresponding period of 1935 and were the highest for any similar period since 1931. From an average of 13.68 cents on January 1, 1936, retail gasoline prices rose to an average of 14.20 and 14.22 cents on February 1, and March 1, respectively, and because of reductions in California declined to 13.92 cents on April 1, 1936. As a result of subsequent increases on the Pacific Coast and several other important centers the average service station price in 50 representative cities is currently estimated at 14.15 cents per gallon. During the first four months of last year these prices ranged between 12.90 cents per gallon on January 1, and 13.64 on May 1, 1935.

ONE OF THE MODERN PLANTS IN CANADA



Crude distillation and cracking plant of the Shell Oil Co. of Canada at Montreal, Quebec

Petroleum Accountants Society Host to A.P.I. Committee

The Petroleum Accountants Society of Tulsa will hold a meeting in the Mayo Hotel at 6 p.m. Wednesday, May 13, at which President L. P. Harrington announces it will have as guests the following members of the executive committee of the A.P.I. Committee on Uniform Methods of Oil Accounting: V. L. Elliott, comptroller, Atlantic Refining Co., Philadelphia, Pa.; H. A. Gidney, comptroller, Gulf Oil Corp., Pittsburgh, Pa.; A. M. Brereton, comptroller, Pure Oil Co., Chicago, Ill.; C. F. Smith, treasurer, Continental Oil Co., Ponca City, Okla.; Ira McFarland, comptroller, Texas Corp., Houston, Tex.; G. H. Forster, comptroller, Union Oil Co. of California, Los Angeles, Calif.; R. S. Durkee, comptroller, Socony-Vacuum Oil Co., New York; C. B. Ware, assistant comptroller, Standard Oil Co. (New Jersey), New York; J. W. Watson, vice president, Shell Petroleum Corp., St. Louis, Mo.; R. M. Riggins, comptroller, Phillips Petroleum Co., Bartlesville, Okla.; R. M. Chan, assistant comptroller, Magnolia Petroleum Co., Dallas, Tex., and B. W. Letcher, general auditor, Standard Oil Co. of California, San Francisco, Calif.

The speakers will be R. S. Durkee, comptroller, Socony-Vacuum Oil Co., New York; F. S. Reitzel, assistant to president, Sun Oil Co., Philadelphia, and V. L. Elliott, comptroller, Atlantic Refining Co., Philadelphia. The meeting will be an outstanding event in the history of the Petroleum Accountants Society, taking place on the eve of the opening of the A.P.I. committee at its annual meeting in Tulsa.

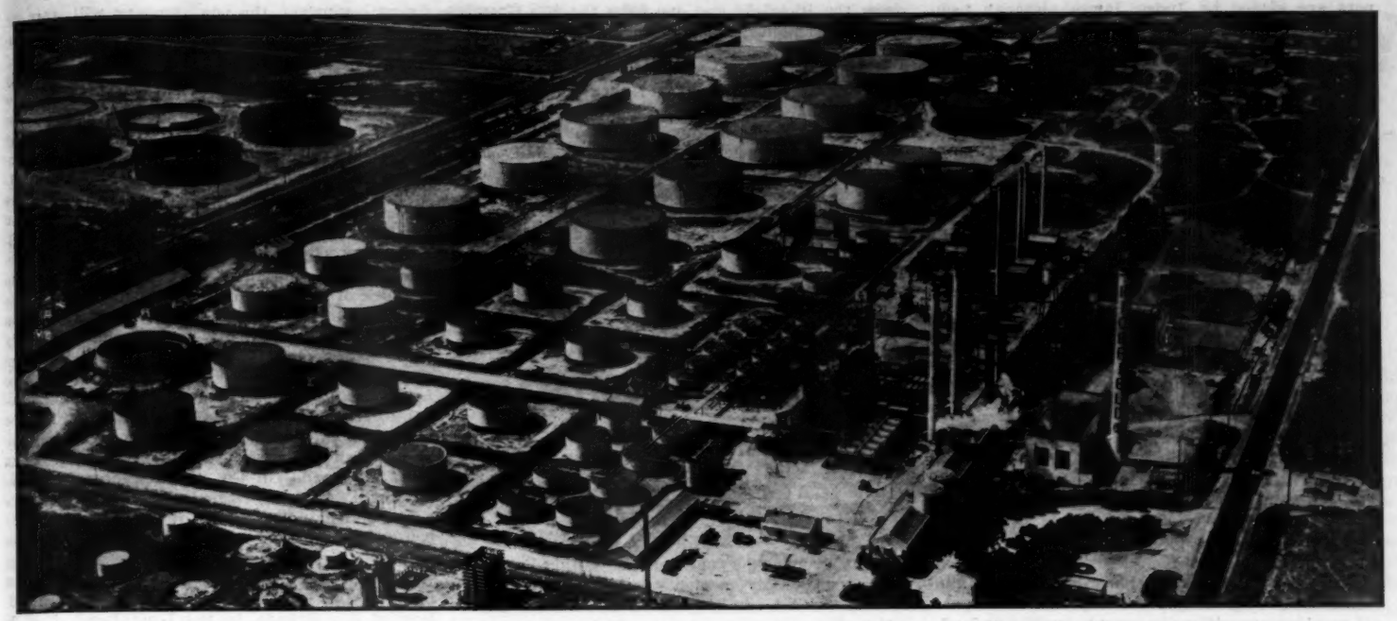
On May 28 the annual golf tournament and wind-up meeting for the society will take place at the Tulsa Country Club, which will end the activities of the Petroleum Accountants Society until its regular fall meeting in September.

Retail Gasoline Price

The average retail price of regular or middle grade octane gasoline based on service station pump prices in 50 cities throughout the United States on May 1 was 14.29 cents a gallon. This figure, which is exclusive of all federal, state and county taxes, represented an advance of .42 cents a gallon over that of the preceding month and was the highest price recorded at this time since May 1, 1930. The restoration of normal prices on the West Coast contributed most to the increase in price over that of April 1, 1936. The May 1 composite price represents an increase of .59 cent since January 1, 1936, and was .65 cent higher than that of a year ago when the average price was 13.64 cents a gallon.

OBITUARY

J. C. ARTHURS, one of Michigan's leading oil operators and contractors since the northern state's fields were opened, died April 25 of an attack of bronchial pneumonia. He went to Michigan during the Muskegon boom in 1928. At one time his company had 22 drilling rigs in operation, a record for the state. Burial was in his home city cemetery at Uhrichsville, Ohio.



Hynes Refinery of Richfield Oil Corporation, Los Angeles County, California. Capacity 55,000 Barrels Daily

Projected Reorganization of Richfield Will Create Major Western Unit

By L. P. STOCKMAN

LOS ANGELES, Calif., May 2. — Final plans providing for the projected reorganization of the Richfield Oil Co., which has been in receivership for more than five years, are expected to be presented to the Federal Court in Los Angeles for approval within the next 30 days as the remaining details to be completed will be ironed out within another fortnight. Richfield Oil Co. went into Federal receivership, January 15, 1931, and William C. McDuffie was appointed receiver in equity. Due to the close affiliation between Richfield and Pan American and because of the complicated problems involved, the latter was placed in receivership, March 5, 1932, and Mr. McDuffie thus became receiver of both concerns. He is still receiver for the two companies. It has been quite obvious for several months past that the minimum sale price of $29,655,510 set by Federal Judge William P. James a few months ago precluded a cash sale and thus opened the way for a reorganization. In response to a petition of the reorganization committee, the court on April 30 postponed sale of the Richfield and Pan American assets until June 1, 1936. It is significant to note also that Judge James will hold a hearing on the cash upset price on May 23 and there is a bare possibility that a revision may be made in the minimum which the court set following the general revaluation completed several months ago as it is far in excess of the Standard Oil Co.'s offer submitted in 1935.

The plan to be submitted to the court for approval provides for an amalgamation of Richfield Oil Co., Pan American and Rio Grande which will be accomplished by a transfer of assets or securities to a new corporation although to all intents and purposes this procedure will only represent a reorganization of the existing corporate units. Bond holders, security holders and creditors will be given equal opportunity to take non-preferred securities of the new corporation in exchange for their present equities with a further provision that in lieu thereof those who do not wish to take advantage of this exchange will be given an opportunity to liquidate their present holdings on a cash basis. Cities Service, which acquired a large block of the outstanding bonds and preferred stock of Richfield and Pan American several years ago, recently exchanged its holdings for Rio Grande stock and as a result the latter company is now held jointly by Cities Service and Consolidated Oil Co. Because of good will value and the marketing activities of the company, the name Richfield will be retained in the title of the new company.

Integrated Units

The reorganized company will start out as a completely integrated concern but will be obliged to undertake a consistent and aggressive wildcat drilling campaign or purchase some of the larger independent operators in order to provide the new company with sufficient crude oil production. At present, the Richfield Oil Co. is obliged to purchase approximately 80 per cent of its crude oil requirements and, in the face of curtailment, the Rio Grande will not be able to make up this deficiency to any great extent. Several California marketers have looked with disfavor on the plans of Consolidated Oil Co. to enter the Pacific Coast territory through purchase of Richfield and Pan American assets but at a recent press conference Mr. Sinclair stated very definitely that his companies in California would strictly adhere to the curtailment program and conform with ethical marketing practices to the same extent followed by other major companies. Most of this opposition has been removed as H. R. Gallagher of Consolidated is thoroughly familiar with conditions on the Pacific Coast due to his previous connection with the Shell Oil Co. of California for several years and consequently would appreciate the local situation. Charles S. Jones, chief executive of the Rio Grande Oil Co., will probably become president or executive vice president of the new company.

Richfield Oil Co. has 2,061,257 shares of common stock of no par value outstanding along with 399,900 shares of 7 per cent preferred stock with a par value of $25 per share. Outstanding bonds include $24,981,000 of Richfield Oil Co. first mortgage 6 per cent maturing in 1944 and $9,145,400 of Pan American 6 per cent first mortgage maturing in 1940. The Richfield Oil Co. owns all outstanding stock of the Pan American which in turn owns the Los Angeles Midway Pipe Line Co., the Watson refinery and tank farm and certain productive leases. Other interests of the Richfield include all outstanding stock of the Signal Hill Gasoline Co., the United Oil Co., Richfield Realty Corp., Vapor Treating Processes, Inc., Richfield Distributing Co., Rocket Oil Co. and the Rioco Investment Co. Until recently, Richfield Oil Co. owned 52 per cent of the outstanding stock of the Universal Consolidated Oil Co. but this stock equity was surrendered to the Universal Consolidated early this year under a compromise agreement which in part provided that Richfield would return this stock to the treasury of Universal Consolidated in consideration of the fact that Universal Consolidated agreed to drop its recognized claims against Richfield and relinquish part of its undrilled acreage to the latter. As a result of this action, Richfield acquired a limited amount of acreage in the eastern extension of the Montebello field and immediately started the drilling of two new wells. These projects, No. 1 Clocca and No. 1 Nutt, are at present rotating ahead at approximately 5,000 feet and should reach the pay within another fortnight. Universal Consolidated, which has production in several fields and owns the outstanding stock of the Lost Hills Water Co., is thus once again operating as an independent company.

Facilities Acquired

As the result of the projected reorganization of Richfield, Pan American and Rio Grande, the new company will start off with a multiplicity of equipment if the Federal Court approves the proposed merger. Theoretically the new company will come into being as soon as the necessary pa-

pers are signed by Judge James although technically it will require an additional three months before the liquidation order becomes final. The multiplicity of equipment is one of the principal reasons why California refiners and marketers are unable to justify an upset minimum sale price of $29,655,510 because much of the equipment secured in such a purchase would be a duplication of existing facilities. This is particularly true of refinery equipment, natural gasoline plants, pipe lines, service stations and distributing depots, automotive equipment and the numerous other adjuncts of the producing, refining, marketing and transportation branches of the industry.

The new company will acquire three refineries from the Richfield and one from the Rio Grande with a combined charging capacity of 107,000 bbls. per day. The former's units consist of a 2,000-bbl. skimming plant at Bakersfield, a 55,000-bbl. skimming plant at Hynes and a 40,000-bbl. complete unit at Watson. At the Hynes refinery, the Richfield has a Cross cracking unit with a rated capacity of 14,000 bbls. daily and two Black cracking units at the Watson refinery with a daily cracking capacity of 16,000 bbls. From the Rio Grande Oil Co. the new company will acquire a skimming plant with a daily charging capacity of 10,000 bbls. on straightrun distillation and a Sinclair cracking unit with a daily capacity of 3,000 bbls. In addition to this refinery equipment, the new company will start operations with eight natural gasoline plants in various fields throughout the state.

From the Signal Hill Gasoline Co., wholly owned subsidiary of Richfield Oil Co., the new concern will receive an absorption unit on the Crampton lease at Elk Hills which has a daily capacity of 5,000,000 feet and another in the Rincon field of Ventura County which is rated at 6,000,000 feet per day. Both of these plants are in operation at the present time. Two absorption plants in the Long Beach field with daily capacities of 18,000,000 feet and 5,000,000 feet respectively, have been shut down for some time due to the lack of sufficient natural gas to justify operation. Another 5,000,000-foot plant at Huntington Beach and a smaller unit having a daily capacity of 500,000 feet in the Midway-Sunset field are also inactive. Most of these units, due to the lack of natural gas, are of no value in their present location but a part of the equipment can be removed to some other district whenever the company develops a sustained flow of wet gas. From the Rio Grande Oil Co., the new operating company will get an absorption plant in the Santa Fe Springs field with a daily rated capacity of 15,000,000 feet but, like most of the natural gasoline plants of the Richfield Oil Co., this unit has been shut down due to insufficient gas. The absorption plant of the Reservoir Hill Gasoline Co., subsidiary of Rio Grande, in the Long Beach field is rated at 15,000,000 feet per day and while this unit is in active operation it is not processing anything like its maximum rating.

Pipe Lines

Pipe line facilities consist primarily of a 10-inch welded diesel powered line extending from Elk Hills in the San Joaquin Valley to tidewater in Los Angeles, a complete coverage in Los Angeles basin and a submarine loading line at Elwood. The aggregate mileage of main trunk and lateral pipe lines which will be acquired by the new company from Richfield, Pan American and Rio Grande should approximate 500 miles. The Richfield and Rio Grande have 6 marine terminals, 120 tankcars and approximately 300 automotive units. Operations are carried on in Pacific Coast territory in the states of California, Washington, Oregon, Arizona, Nevada, Utah, Montana, Idaho and in British Columbia. Many of the Richfield service stations will be revamped and tentative plans call for the erection of about 100 additional retail units and the modernization of equipment in distributing depots. Richfield, Rocket and Rio Grande gasoline is marketed through about 5,000 dealers and resellers.

The new company will start off with a daily production of approximately 16,800 bbls. per day and crude oil purchase obligations involving the Barnsdall Oil Co. and the Pacific Western Oil Co. covering a part of the production of these operators. The Rio Grande and Barnsdall are jointly interested in drilling and production operations on certain properties and tideland leases in the Elwood field of Santa Barbara County. This development is on a fifty-fifty basis and Rio Grande purchases the total production which at the present time approximates 3,500 bbls. per day. Rio Grande's other main production is in the Midway-Sunset field, where daily production approximates 225 bbls., and at Long Beach and Santa Barbara Mesa, where daily production is at present averaging around 1,350 bbls. and 425 bbls., respectively. Richfield is producing about 2,900 bbls. per day at Elk Hills; 300 bbls. at Kern River; 100 bbls. at Lost Hills; 1,900 bbls. at Midway-Sunset; 550 bbls. at Rincon; 500 bbls. at Huntington Beach; 6,500 bbls. at Long Beach; 175 bbls. at Santa Fe Springs; 100 bbls. at Torrance and 25 bbls. per day in the Whittier field. Aggregate storage facilities for crude and refined oils including steel tanks, reservoirs and tanks in distributing depots total about 7,500,000 bbls., although no data is available with respect to the amount of oil actually in storage. Consummation of present plans for the reorganization of Richfield Oil Co., Pan American and Rio Grande will give the new company seven tankers and four barges with a total carrying capacity of 510,000 bbls. Richfield Oil Co. has 298 wells capable of producing. Rio Grande has 30 producing wells and a 50 per cent interest in 31 operated by the Barnsdall Oil Co.

Ninth International Petroleum Exposition to Open May 16

The ninth International Petroleum Exposition, which opens in Tulsa next Saturday, May 16, and continues through May 23, is expected to surpass all previous expositions in extent, quality and advancement shown in equipment used in the oil industry. This big industrial show will be a comprehensive panorama of mechanical and scientific improvements in instruments and equipment designed for the more efficient production, transportation and refining of oil. Exposition officials are anticipating a record-breaking attendance.

Thousands of tons of heavy machinery and delicate instruments valued at around $1,000,000 will be exhibited. Fully 85 per cent of it will be in operation. Most of it will be equipment and devices invented or improved since the last previous exposition in 1934. The exhibits will cover every phase of the industry, from preliminary exploration of wildcat areas to the finished product as it goes to the consumer. Naturally, production, drilling, pumping and refining equipment will predominate, but there also will be extensive exhibits of the marketing and transportation phases of the industry.

Modernistic designs in service stations and new devices for dispensing gasoline and lubricants and servicing automobiles will be among scores of exhibits which will appeal particularly to those in the marketing branch. Twice as much space will be occupied by marketing exhibits as at any previous exposition, and for the first time this year several major integrated oil companies are planning to send large groups of salesmen and other marketing representatives to the exposition purely as a promising experiment in sales education.

A considerable portion of the 180,000 square feet of exhibit space, covering the 20-acre exposition site, will be devoted to display of material and equipment used in transportation of petroleum and products. Hoists, couplings, fittings, welding machines, improved designs for pipe line work, new models in diesel-powered trucks and tractors and other devices used in transportation will be shown for those interested in this phase of the industry.

Although the exposition primarily is mechanical, it is not entirely so. The big oil show has its human interest side, with the pioneers of the industry being honored at special ceremonies. Men who have been engaged in the oil industry for 30 years or more will be guests of the exposition, and will have their special day at the big show. One of them will be chosen as the "Grand Old Man of the Oil Industry" and one as the "Grand Old Man of Tulsa." Those chosen grand old men of the industry at previous expositions were: J. Alex Stephenson, Tulsa, 1927; James Amm, New York, 1928; John C. Looker, Bradford, Pa., 1929; E. H. Sloan, Pittsburgh, Pa., 1930, and N. V. V. Franchot, Olean, N. Y., 1934. Previous grand old men of Tulsa were Joseph H. Evans, 1928; Martin Moran, 1929; J. H. Larkin, 1930, and J. S. Follett, 1934. Many pioneers have been nominated for these honors this year. In order to be eligible for the awards, those nominated must attend the exposition, unless exempted by the committee. Nominations still are being received by Hal Gruber, committee chairman.

Gusher in Oklahoma City Field Will Increase Play Beyond City Limits

By L. G. E. BIGNELL

Barnsdall Oil Co. No. 1 Banks-Geyer, SE SW SE section 15-12-3w, just north of the city limits in the Oklahoma City-Capitol extension area, flowed 480 bbls. of oil in one hour with drill pipe still in the hole after drilling plug and deepening to 6,487 feet. When tools were removed for potential test it failed to flow, either because of insufficient pressure or because cavings had shut off the flow. Gas was being injected through drill pipe in an effort to revive it so a potential test can be made. Completion of this well with a high rate of flow will insure speedy development of the area just north of the city limits, where about 40 locations have been staked.

British-American Oil Co. No. 1 Burnham, NW SW section 23-12-3w, on the east side of the capitol extension area, was flowing more than 200 bbls. an hour while drilling below 6,430 feet. It was producing about 20,000,000 feet of gas daily.

There were 82 wells actually drilling in the north extension to the Oklahoma City field with 5 derricks erected and being rigged up and 17 locations staked, making a total of 144 activities in this new area, as reported for the week ending May 2. There are 22 wells completed in this new zone. About 120 of these activities are being carried on by seven of the larger companies with the remaining 24 operations divided among companies drilling only one or two wells. There has been some delay in work due to cutting off water supply from the city mains and the necessity to drill water wells to either the 700 or 800-foot sands. It is anticipated active drilling will be resumed on all wells very shortly with the completion of the water wells.

Rules to Be Enforced

Operators in the Oklahoma City field have been formally notified by Wm. J. Armstrong, conservation officer for the Oklahoma Corporation Commission, that the commission intends to enforce the rules and regulations covering drilling and producing operations in this field. It is explained some seem to think there are too many rules and regulations and have assumed because exceptions have been made in special cases the commission does not plan to enforce rigidly the regulatory measures pertaining to this field. Mr. Armstrong states this is not the case and the orders issued will be enforced.

It is further pointed out that long before proration was ever practiced in this state the law required that every derrick be plainly marked with the name of the company, location, number of the well and name of the land owner, and no exception is to be made and operators are given until May 8 to comply with this rule.

A casing regulation states that if 1,000 feet of surface pipe is run and cemented the cement must be allowed to set for 72 hours before drilling is resumed and each flow or oil string of casing set at greater depths must be cemented and the cement allowed to harden for not less than 168 hours before drilling is resumed.

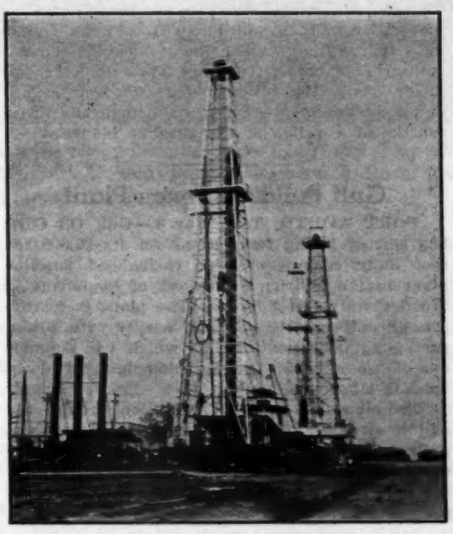
In drilling in under pressure only sufficient oil to actually complete the work will be credited to the well and when the well starts to produce this oil will be deducted from current allowables secured only after official potential test has been made.

Every new pipe line and connection must be spotted upon plat of properties and filed with the conservation officer's office.

Operators are cautioned to be certain B.S. hauled off the lease in tank-wagons does not contain any pipe line oil.

No well spacing order has been filed for the district north of the city limits because House Bill 187 carries a provision, the purpose of which was to except the Oklahoma City field from this regulation.

Operators in this field have been duly notified of all rules and regulations covering operations in the Oklahoma City field through the mailing



Anderson-Prichard No. 1 Wheeler in foreground a key well in new extension

of mimeographed copies of same and if copies have not been received they may be secured by applying to Mr. Armstrong's office.

Drilling Difficulties

The operators in the new drilling zone have experienced many difficulties and the one notable problem has been securing contractors with suitable equipment for drilling these 6,400-foot wells. When the zone was opened immediately after the March 24 election the companies and individuals able to secure drilling permits promptly entered into contract with all easily obtainable drilling outfits and they moved in and started the first group of wells. Since then the locating of suitable equipment has been increasingly difficult and it has been noted during the past two or three weeks operators have given contracts to drilling companies capable of furnishing diesel engine powered rigs, diesel engine-electric generators outfits and electric motor units.

This situation has been accentuated by the shortage of water due to the necessity for the city water department cutting off supply to drilling rigs to conserve the water for use by the citizens of Oklahoma City. Lack of rain in the drainage area adjacent to the reservoirs of the city has made this situation more acute. To offset this condition operators are drilling water wells to the 700 or 800-foot water sand and the number of wells to be required will depend upon the total number of oil wells to be drilled, as each steam rig requires about 2,500 bbls. daily while the electric or diesel powered rigs require about 1,000 bbls. of water for their daily operation. These water wells have average capacities around 8,000 bbls. each or one water well will serve about three steam rigs or eight of the others.

Every piece of available water well equipment is in use and the holes are started to take 350 feet of 10-inch casing. Some cement this surface string, others do not. Below the 10-inch pipe the hole is reduced for another 250 feet of 8⅝-inch liner making the total depth of the two size holes about 600 feet. From that point to the water sand depends upon locality but it is usual practice to set another 6⅝-inch liner perforated in the lower two joints into the water sand. It may be either about 700 or 800 feet total depth.

The average water level is now about 200 feet below the surface and these wells are being equipped with vertical electric centrifugal pumps having capacities of about 8,000 bbls. daily against total head of approximately 400 feet. The water wells thus far drilled have ranged in size from 7,000 to 13,000 bbls. daily and there has been no appreciable drop in capacity thus far but what will happen when all the new wells are finished remains to be found out. This is a good quality water for steam purposes and has been used by many hotels and industrial plants in the city.

Another problem the operators had to take care of was handling mud at the wells. Space limited the size of slush pits and it is now usual practice to dig one 20 by 80 by 6-foot deep slush pit and pass all returns from the wells over vibrating screens. The cuttings are removed and carted away from the location and any extra mud made while drilling is pumped at set intervals into a mud disposal system consisting of a 7-inch pipe line leading back to the old mud disposal plants near the Canadian River south of the present active area. The slush pumps used for circulating the mud in the holes are used to pump excess mud into this pipe line system and each well has an appointed time during each day during which it is allowed to deliver this mud into the system. The schedule is worked out carefully and in this way the mud system is kept fully loaded at all times and no extra mud accumulated at the various wells.

Natural gas is provided for the steam boiler plants by a 12-inch pipe line from natural gasoline plants in the south field. Residue gas from these plants is forced through this pipe line to the northeast extension field and delivered to the boilers at about 10 pounds pressure. Some burners work at about 3- to 4-pound pressure, but the pressure is variable depending upon the type of burner in the boilers. Extra gas from the oil and gas separators is delivered into a 24-inch gas gathering line and taken to the natural gasoline plants where it is treated to remove gasoline.

Drilling Outfits Scarce

As activities have increased common labor has moved into this field and is now plentiful. There is no shortage of this type of labor in the Oklahoma City field now, but there is a demand for additional drilling outfits suitable for this heavy duty and as other zones are brought into active drilling this condition will become more acute.

The May allowable for wells in the northeast extension of the Oklahoma City field is based upon 8½ per cent of the potential. Total daily potential for the 21 wells now completed in this zone is 388,164 bbls., and it is anticipated about 13 more wells will be completed during May adding another 66,000 bbls. potential. Upon this basis the well in the northern part of Oklahoma City field will be permitted to produce about 1,175,000 bbls. during May.

Natural Gasoline

Auto Engineers at N.G.A.A.

For the second consecutive year the automotive industry is to take an active part in the technical discussions at the annual convention of the Natural Gasoline Association of America, in the Hotel Tulsa, May 13-15. Wheeler G. Lovell, assistant chief engineer for the General Motors Research Corp., Detroit, Mich., and Gilbert Way, assistant chief engineer, Chrysler Division, Chrysler Corp., Detroit, are to represent their companies at this convention.

In commenting upon this portion of the program, George Bunn, Phillips Petroleum Co., chairman of the program committee, indicated that while discussions of this type have usually been of a highly technical nature and rather mystifying to those who have not closely followed developments in this field, these papers this year are to be in a more popular vein. Accent is to be placed on the economic significance of trends rather than on the engineering problems involved, he said.

According to William F. Lowe, secretary of the association, these discussions will tie in closely with a paper by Dr. G. G. Brown, professor of chemical engineering, University of Michigan, who is to make his final report on the two-year research program conducted at the university under the sponsorship of the Natural Gasoline Association.

Another difficult but interesting subject scheduled for popular treatment on the convention program deals with the spectacular side of the chemistry of hydrocarbons. Dr. Sidney Born, a director of the School of Engineering, University of Tulsa, is to deliver this paper.

New Kansas Gasoline Plant

The Natural Gasoline Corp., subsidiary of the Warren Petroleum Co., is building a 25,000-gallon natural gasoline plant at Galva, Kans., to process approximately 12,000,000 feet of gas per day, the gas being produced in the local field. Construction is already under way and completion of the work is expected to be about the middle of July. The excess capacity provides for the taking of additional quantities of gas as the new field is developed. Ten 300-horsepower new type compressors are being ordered to the plant site and three electric generating units will be used. Initial production will approximate 15,000 gallons per day.

Rodessa Gasoline Plants

SHREVEPORT, La., May 4.—Utilization of rich gas production in the Rodessa pool of Caddo Parish, Louisiana, and of Cass County, Texas, is growing in general practice and several of the larger acreage holders are striving to work out a plan for returning residue of gasoline plants to the reservoir.

It is estimated by some that as high as 250,000,000 feet of gas are blown into the air at Rodessa either directly from separators through flares or through exhausts of most of the gasoline plants now in operation. The latest natural gasoline plant completed at Rodessa is that of Pelican Oil & Gasoline Co. The concern's plant of 85,000 gallons daily capacity is undergoing final test runs and will be on commercial production soon. Owners plan to manufacture about 35,000 gallons of natural gasoline at the present with the entire output contracted to Warren Petroleum Co. of Tulsa. Warren has also signed contract to use the entire output for a period of five years from United Gas Public Service Co.'s natural gasoline manufacturing facilities. It is reported the United company, one of the largest acreage holders in the Rodessa district, will soon launch a natural gasoline plant construction program at Rodessa involving expenditure of $1,200,000. Some observers have assumed that the building program, if consummated, will block negotiations for sale of United's oil holdings in the Rodessa district, a rumor which has been current for weeks.

Jarecki Manufacturing Co. of Tulsa has been awarded contract to start immediate construction of the Pat Marr and others natural gasoline plant of 6,000 to 10,000 gallons daily capacity. The plant will be located on the John Thompson, Ralph Bristol, Marr and others Hunter lease in section 13-23-16.

Eastern Texas Pipe Line Co. is now engaged in building one 4-inch and a 2-inch line to gather gas for its natural gasoline plant in the Rodessa townsite and in other unconnected wells. Eastern Texas Production Co. (Freeman Burford interest) is now manufacturing about 5,500 gallons of natural gasoline per day at its Caddo Parish plant.

Rodessa Gasoline Plant Addition

SHREVEPORT, La., May 4.—United Gas Public Service Co. plans to lay a 10-mile, 24-inch gas line to handle the gas from the Rodessa field, estimated at approximately 60,000,000 feet daily. The gas will be delivered to the Myrtis gasoline plant to which an addition will be built. A 24-mile 16-inch line will be laid to deliver the gas from the plant to the main line. Rodessa gas yields about 1¼ gallons per 1,000 feet, a half gallon during compression to 450 pounds and three-fourths of a gallon at the gasoline plant.

Gulf Building Texas Plant

FORT WORTH, Tex., May 4.—Gulf Oil Corp. has started laying foundations for its 25,000,000-foot daily compressor type casinghead gasoline plant in the O'Brien field west of Monahans in Ward County, West Texas. The plant is to contain 10 units and be equipped mostly with Braun processing equipment, all of which will be new except some engine parts being brought down from Oklahoma plants.

The plant is to be in operation around the middle of July and 63,000 feet of various size gas gathering lines, ranging from 20-inch on down to 6-inch, are to be laid to gather gas throughout the field to serve wells on lands of G. W. O'Brien and others and Hutchings Stock Association lands.

Refinery Projects

New Cracking Units Started

DETROIT, Mich., May 5.—Construction work has been started on the 1,000-bbl. Dubbs two-coil selective cracking unit and the 1,000-bbl. Dubbs reforming unit being built by the Ralph M. Parsons Co. for Leonard Refineries, Inc., on a site adjacent to the Alma, Mich., 3,000-bbl. plant operated by the Acme Refining Co., the latter a subsidiary of the Leonard company.

Leonard Refineries, Inc. is capitalized at $750,000. It embraces substantial crude production interests along with those of John Martin and Fred Morgan.

John W. Leonard is chairman of the board and his son, John W., Jr., is president. John Martin is secretary and treasurer; Reid Brazell, superintendent of the refinery; M. D. Vanderley, sales manager.

In constructing the new units alloy piping and corrosion-resisting pressure vessels will be used. Absorber and stabilizer equipment will be installed, together with a doctor-treating plant, a water-cooling tower and circulating system, and additional tankage.

One of the features of the plant will be a specially designed tank truck loading rack for handling gasoline, kerosene, stove distillate and gas oil. It is to be built of concrete and protected by a canopy. It will accommodate six trucks at a time.

The loading is to be done direct from refinery storage tanks through metered lines by high speed pumps driven by explosion-proof electric motors, housed in a steel building. The pumps will be controlled by the man on the loading rack.

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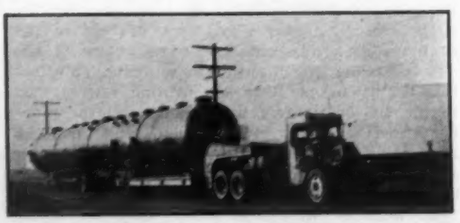


Pressure vessel being moved to the new Norwalk, Calif., refinery of Wilshire Oil Co.

New Rodessa Plant Planned

SHREVEPORT, La., May 4.—Another independent refinery to operate on Rodessa crude is planned at Ida, Caddo Parish, Louisiana town northeast of the present producing limits of the field. Charter has been issued for the Quality Refining Corp. headed by H. D. Easton, Jr., of Shreveport. Construction of a 700-bbl. per day skimming plant by the newly organized company is proposed. Arrangements have not been completed for connections. Bar-Tex Pipe Line Co. (Phillips) owns nearest production to the proposed refinery site.

Griswold Refining Co., which has a refinery completed at Rodessa, is shipping most of its crude purchases to its plant at Cedar Grove on the edge of Shreveport. The company's shipments range from 1,800 to 3,800 bbls. per day. The group of independently owned wells to which Griswold is connected in the Rodessa pool are producing approximately 3,500 bbls. per day.

Shoreline Refining Co. expects to have its cracking unit at Lewis, Caddo Parish, ready for operation by June 15.

Skiff Field Refinery

CHATHAM, Ontario, May 2. — In the Skiff field, southern Alberta, Devenish Petroleums, Ltd., has commenced operation of its refinery with a capacity of 100 bbls. of crude per day. The refinery utilizes the output of Devenish Petroleums No. 3 which pumps up to 40 bbls. a day, this being supplemented by imports of Kevin crude. The plant turns out distillate and diesel oil marketed to farmers in southeastern Alberta. Devenish Petroleums No. 5, LSD 4, section 27-5-14w4, standing at 630 feet, will be completed this summer and additional tests may be drilled.

Refinery Gas Contract Closed

MUSKEGON, Mich., May 4.—West Michigan Consumers Co., of Muskegon, Mich., last week closed negotiations with the Old Dutch Refining Co. to purchase by-product gas from the latter's new $200,000 cracking unit now under construction. The West Michigan company, operators of a 40-mile system of gathering and distribution lines serving about 30 Muskegon industries, will lay about 3 miles of 6-inch to connect with the new supply.

Contract calls for delivery of at least 1,000,000 cubic feet at 2½ cents a therm, or about 30 cents a 1,000 cubic feet at 1,300 to 1,400 B.tu. heat content. A maximum of 1,250,000 cubic feet a day is the anticipated production.

Construction of the pipe line extension will be started about June 1 by the West Michigan company, while the Old Dutch plant is expected to be completed about July 15. Upon completion of the cracking plant, the West Michigan company will pay the Old Dutch $50,000 in advance for gas.

Colorado Chain Tax Decision

DENVER, Colo., May 4.—Judge Robert W. Steele today upheld in Denver district court the right of the state of Colorado to collect approximately $250,000 a year in chain store taxes from major oil companies.

The decision, attorneys for Standard Oil Co. (Indiana) said, will be appealed to the state Supreme Court.

Pipe Line Activity

Michigan Pipe Line Project

MUSKEGON, Mich., May 6.—John Borden, president of the Old Dutch Refining Co., says the projected barge and pipe line system to transport crude from East Texas and Louisiana to independent refineries in Michigan recently proposed by Pittsburgh, Pa., and Detroit, Mich., financial interests will be started soon.

H. J. Russell, of Mellon and Stewart, Pittsburgh, announced to Michigan refiners and E. G. Guy, Mount Pleasant, Mich., refinery engineer, he and his associates, including Mark Hanna, Detroit, are ready to proceed with their plans. He said a well known engineering concern is interested in the proposed 360-mile line to be laid from a point 100 miles below Cincinnati, Ohio, on the Ohio River to central Michigan. Branch lines would be laid to the Old Dutch plant here and to refineries in the Detroit and central Michigan area.

Backers of the project will not require commitments from Michigan refineries to purchase crude, Mr. Russell said at the Detroit conference. He explained they were satisfied they could sell sufficient crude to warrant the system at 10 cents a barrel less than the prevailing cost of Michigan crude.

Mr. Russell returned to Detroit last week after, he said, assuring a sufficient supply of crude from two Louisiana fields, Rodessa and Bayou Bouillon, and East Texas.

Crude is to be barged to the southern terminal of the pipe line on the Ohio River. It will take about a year to lay the line ready for service.

Steel barges loaded with reconditioned pipe for Texas Pipe Line Co.'s line out of Lafitte field, Coastal Louisiana. Derrick barge loading pipe shown in the background

Continental Kansas Contract

Williams Brothers Construction Co. has been awarded the contract to build the 79-mile pipe line in western Kansas for Continental Oil Co. from Geneseo to Valley Center with a branch to Moundridge. The subcontract for multiflame Lindewelding was awarded to Osage Construction Co. There will be 65 miles of 8-inch and 14 miles of 6-inch new pipe in 40-foot lengths. Work started May 1.

Dodge-Denman Line

FORT WORTH, Tex., May 2.—Cosden Refining Co. is building 12 miles of 4-inch oil pipe line from its refinery at Big Spring to connect with leases in the Dodge-Denman pool in eastern Howard County. A pumping station is being erected in section 11, Block 30, Township 1s, T.&P. Survey, with one 10,000-bbl. tank going up on this location. Wells of the International Oil Co., Herschback, Ennisbrook and Sinclair Prairie Oil Co., will furnish the line with oil.

Michigan-Toledo Line

TOLEDO, Ohio, May 4.—The new 140-mile pipe line from the oil fields of Michigan to Toledo refineries saves from 12 to 14 cents a barrel in transportation costs for crude. Approximately 10,000 bbls. a day is the capacity of the line using 750 pounds pressure and the capacity can be doubled with additional pumping facilities when required.

The 8-inch pipe line was laid in 60 days. It cuts across swamps, over rolling country, through some relatively high hills, and six river crossings were made. The largest of the river crossings was the Maumee River at its mouth. Nine railroad crossings were also made, and as in case of highway crossings, all were tunneled by hand. Frequently great boulders were encountered in the glacial soil of southern Michigan. Most of them had to be dynamited. Near Milan it was necessary to detour around some property owned by Henry Ford.

The pipe line is welded so that it forms one continuous pipe for the 140 miles. Toledo refineries are also served by pipe lines which bring crude all the way from Texas and other southwestern states.

Four large refineries operated by Standard Oil Co. of Ohio, Pure Oil Co., Sun Oil Co. and Gulf Refining Co. have a capacity of more than 60,000 bbls. of crude oil daily, employ more than 1,000 men and have a pay roll of more than $1,500,000 annually.

Some of the output of the refineries is transported to Detroit by pipe line. Most of the refineries also have marine facilities.

Montana-Minnesota Line?

CALGARY, Alberta, May 4.—Plans are being discussed for utilizing Alberta gas as an emergency reserve in connection with an extensive project for piping of Montana gas to Minneapolis, St. Paul and other Minnesota cities. Sources of supply include the Rogers-Imperial well, east of Coutts, Alberta, controlled by Range Oil & Gas Co. of Calgary, with a shut-in production of between 50,000,000 and 65,000,000 feet a day; and the Turner Valley field, where large quantities of surplus gas are now going to waste. The syndicate promoting the pipe line is headed by E. B. Coolidge of Great Falls, Mont.; and construction proposals are awaiting the sanction of the United States federal government.

Proposals to export surplus natural gas from Alberta to Saskatchewan and Montana were submitted some years ago, but were negatived by the provincial government of that time. The attitude of the present government may be more favorable. Range Oil & Gas Co. has for several years exported small quantities of gas to Montana under federal permit to meet peak load demands.

Pipe Line for Coal

WASHINGTON, D. C., May 4.—The possibility that coal-carrying railroads might be confronted with competition from coal transportation by pipe line was presented at an Interstate Commerce Commission freight rate hearing.

John D. Battle, executive secretary of the National Coal Association, opposing a plea by Class A railroads for indefinite extension of emergency freight surcharges scheduled to expire July 1, cited "piped coal" as a possible shipping medium unless rail rates are whittled down.

Mr. Battle said after the hearing that the coal would be propelled through an 8 to 10-inch pipe line by water under pressure. The coal would be "ground as fine as talcum powder," he added, and dried at its destination. It would be used in powdered form in furnaces designed for the purpose.

"The plan is being studied by engineers," he continued, adding it already has been tried experimentally for short distances and may eventually be developed to carry coal for distances up to 200 miles.

Contract for Indiana Line

NEW YORK, May 2.—A contract has been awarded to Connor & Sons Construction Co., Kansas City, Mo., to lay a 24-mile 12-inch pipe line for Kentucky Natural Gas Corp. It will be a Multiflame Lindewelded line and will run between Terre Haute and Montezuma, Ind., connecting the present natural gas line from Owensboro, Ky., to Terre Haute, Ind., with Panhandle Eastern's main trunk line.

Natural Gas

Natural Gas Research

The annual report of the Mellon Institute of Industrial Research says:

The Research for the Natural Gas Industry fellowship of the Hope Natural Gas Co., held by J. B. Garner since its establishment in 1915, has a productive record of which the Institute is proud. Much of this fellowship's research in 1935 related to the determination of the utility of liquid normal butane as an industrial solvent, especially for extracting oils from certain seeds, fat from cacao, oil from orange peel, fat from wool, and vitamins and other principles from plants. Some of the processes now under development are of industrial promise.

Another line of investigation is concerned with the compressibility of natural gas. In addition, the fellowship, with a staff of aids from the donor's organization, has studied gas leakage conditions in the Pittsburgh district. Surface indications have been found by scientific inspection and underground location of gas leakage has been accomplished by a program of systematic procedure. Gas leakage has been eliminated by substantial and efficient repairs. In particular, schools, churches, hospitals and theaters have been examined thoroughly and any gas leakage conditions remedied to make these institutions safe.

Numerous cases of carbon monoxide poisoning have been investigated; all of them were caused by inefficient heating appliances and by stoves without chimney outlets.

A piece of work that has been a feature of the fellowship's activities for 20 years is the collection and analysis of samples of gas, at three-month intervals throughout each year, from all the metering stations owned by the donor and affiliated companies in Pennsylvania and West Virginia. The composition, specific gravity, and heating value of these samples are determined, and by these data there is being written a story of the changes that have been and are occurring in natural gas as produced with a constant decline of well pressures.

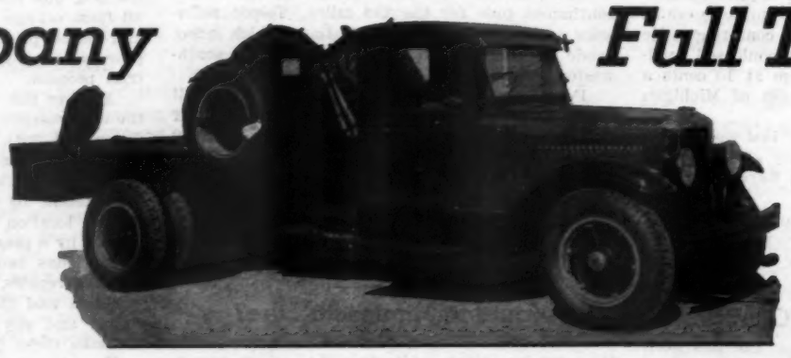
Another Alky Conference?

DETROIT, Mich., May 4.—The second Dearborn conference called by Francis P. Garvan, president of the Farm Chemurgic Council and of the Chemical Foundation, will be held at Dearborn, Mich., May 12 to 14 inclusive, with an estimated attendance of over 1,000 agriculturists, industrialists and scientists.

The stated purpose is to advance industrial use of farm products through applied science, thus helping to relieve the surplus crop situation, creating new industries and aiding in the solution of the unemployment problem.

Approximately 60 speakers will present formal papers and participate in the discussions. Reports of progress and new projects will be given concerning chemurgic activities in agriculture, industry and science.

Running Transportation Department of Company Full Time Job



By ROY F. FIKE

Manager transportation department, Mid-Continent Petroleum Corp.

Is an automotive department a main issue or just a segment of some other department?

Positively not a segment! Several years ago in the setting up of a number of oil company departments, at which time automotive equipment had not become as important a factor in various operations as it is today, there might have been some justification for operating the automotive equipment the companies had through a purchasing department or some other department head. However, the picture has entirely changed in the past 10 years; so that countless thousands of dollars are being wasted through lack of proper set up and control of automotive equipment.

This is not confined to the oil industry alone. If the taxpayers of cities and states realized the tremendous waste that is going on in the operating of their automotive equipment through haphazard operation and control there is no question but that taxes could be very materially reduced. Political subdivisions are perhaps the greatest wasters from an automotive operating standpoint that there are today.

Capable Control

Without fear of contradiction I state that any fleet of 100 units or more can well afford to operate a transportation department under the control of a capable man. Too many times superintendents of transportation have the title but no jurisdiction and they receive a compensation about in proportion to a high-class chauffeur. They are subject to the dictates of the men who do not know costs, standardization policies or a great many other saving factors in the operation of equipment and the men who do receive the salaries commensurate with the responsibility of a transportation superintendent give little or no time to its operation and depend nearly 100 per cent on the man receiving a very meager salary.

The president of an oil company told me one time that he followed one of the major oil companies in setting up his departments, when his company was organized, and that this major company in setting up its departments did not believe that a transportation superintendent or department was necessary and it might be said that the original company setting up its departmental operations was justified in its stand, as the company was departmentalized some 18 years ago when the horse and wagon was more in evidence than trucks and various other field equipment.

However this other company following the major company's example was set up about 12 years ago and this president realized about six years ago they were losing money by not having a separate department for automotive problems and showed me cost sheets which gave every evidence of from 50,000 to $100,000 loss that could have been saved annually in the proper operation of the fleet of 150 units.

This president's set up was no different than a great number of oil companies of today who feel that a purchasing agent or some other department head can operate through a mechanic or mechanical supervisor 200 to 500 units of automotive equipment as well as setting up a strict transportation department. I do not believe that a purchasing agent can save one dollar in purchasing automotive equipment and perhaps will lose some money for a company in his buying.

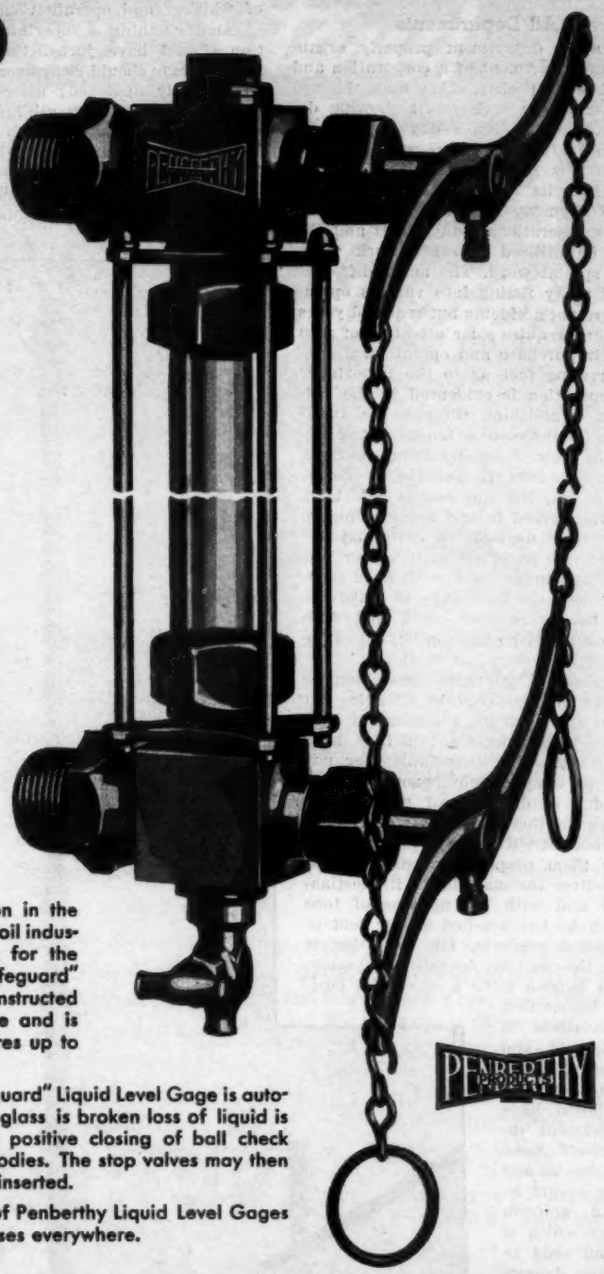
A transportation superintendent has the records of his operating costs, together with all the vast volume of information which should be in his files concerning improvements, accessories and prices with all the maximum discounts available to him. His records should show him the condition, age and book value of all equipment and he should know the proper time to dispose of same as well as know its value, together with proper equipment to replace the retiring units.

Mechanical operation of automotive equipment is only one of the various phases in which money can be saved. We know that when trucks in a fleet are widely scattered central garages are not for economy; however where fleet operators have from 50 to 100 units at a more or less centralized point it is economy in my judgment to have your own mechanical repair shop. Where the equipment is scattered the proper connections should be made with the garages or dealerships handling the equipment you are operating to do all your repair work on these particular units and an itemized repair sheet sent into general headquarters at least once each month.

Handling Repairs

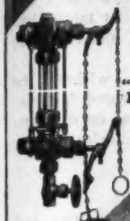
Proper instructions should be given all operators of automotive equipment as to how to handle their repairs, where to have them made as well as definite company policies in connection with the care and control of their equipment. Too often employes become careless and have accidents, have their cars repaired after the accident and send in the bill; when upon analysis it is found the operator was entirely at fault in the accident. Now why should the company pay for the gross negligence and carelessness of operators of its equipment? There is just no reason and not until fleet operators place a penalty upon their equipment operators for such accidents by making them pay for same, if they care to continue their work, will accidents be reduced to a minimum. Another thing is the handling of material by

"SAFEGUARD" LIQUID LEVEL GAGE



Automatic Injector

Ejector, Syphon or Jet Pump


"Navy Type" Liquid Level Gage

"Safeguard" Automatic Liquid Level Gage

"All-Iron" Automatic Liquid Level Gage

Gas Engine Lubricator

Snap Lever Oiler

Plain Brass Oil Cup

Plain Compression Grease Cup

Screw Plunger Grease Cup

Spring Compression Grease Cup

Automatic Electric Sump Pump

Automatic Cellar Drainer (Water or Steam Operated)

Dipless Air Cock

SAFETY is a primary consideration in the selection of equipment for the oil industry—that is an important reason for the popularity of the Penberthy "Safeguard" Liquid Level Gage. It is ruggedly constructed of high grade steam metal bronze and is recommended for working pressures up to 300 pounds.

Operation of the Penberthy "Safeguard" Liquid Level Gage is automatic and dependable. When the glass is broken loss of liquid is prevented by the immediate and positive closing of ball check valves in both upper and lower bodies. The stop valves may then be safely closed and a new glass inserted.

"Safeguard" and the other types of Penberthy Liquid Level Gages are carried in stock by supply houses everywhere.

PENBERTHY INJECTOR COMPANY

Manufacturers of Quality Products since 1886

DETROIT, MICHIGAN — WINDSOR, ONTARIO

trucks in the various fields of operation. If truck drivers break up material which they are hauling, through carelessness, the best way to cure such carelessness is to let these men dig down into their pockets and pay for the repairing of their breakage. This practice will pretty well assure the company that when they start material from one destination to be delivered in the field it will arrive there about as it left the original point of loading.

Serves All Departments

A transportation department properly organized serves every department of a corporation and while it cannot show profits, other than through its savings, it can help each profit showing department increase its profits. Today is a day of special equipment. Continual progress is being made in the various field equipment. Where we used to pull our wells with teams and tractors, today pulling equipment such as shown reduce the cost of these operations many times and the equipment can be utilized in other work when not needed for special work. The many different special units of today fitting into various operations perfectly are not accidents but required years of development and require some attention of men to supervise their purchase and operation.

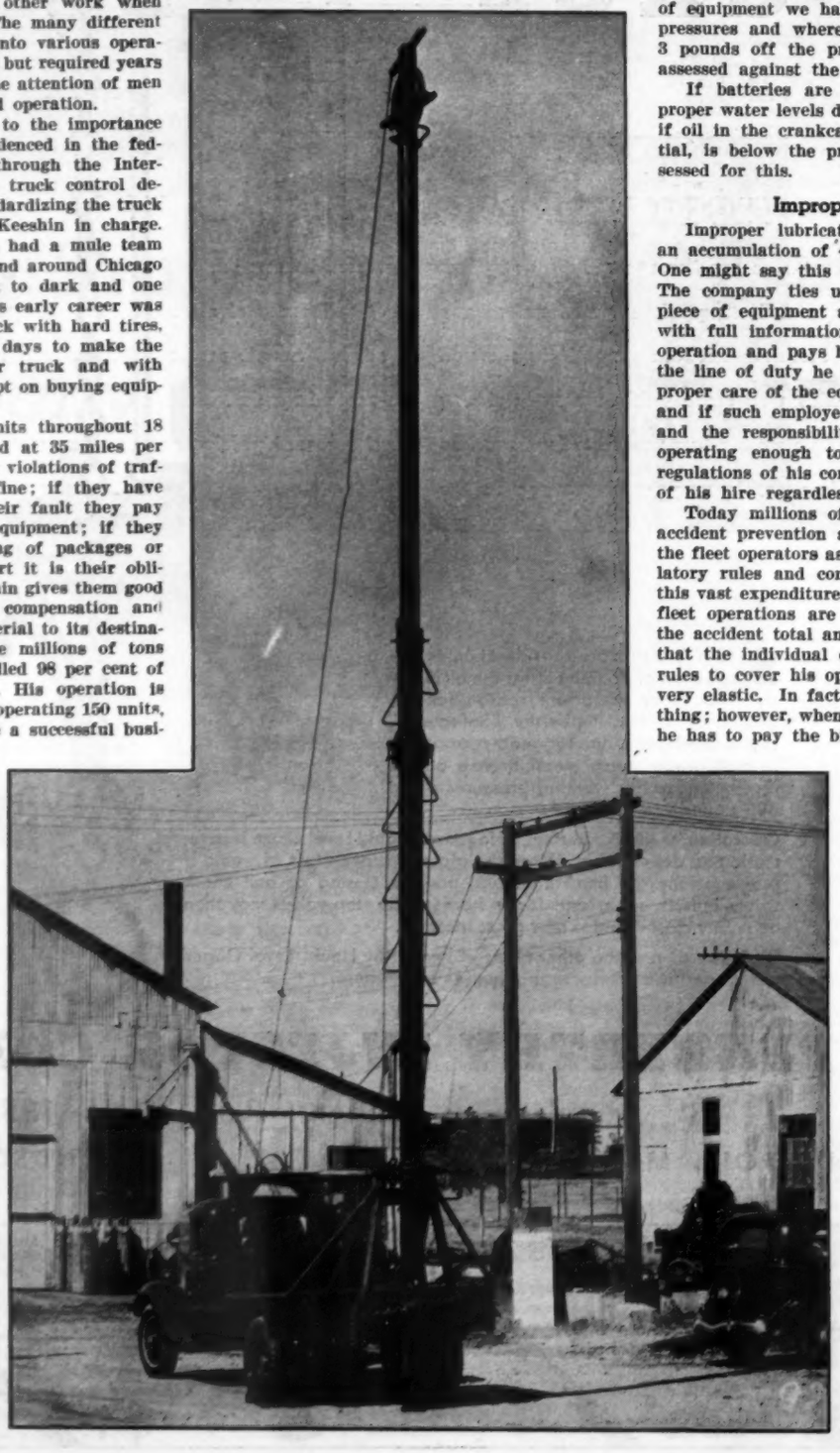
A most interesting fact as to the importance of automotive operation is evidenced in the federal government establishing through the Interstate Commerce Commission a truck control department with the view of standardizing the truck industry and placing John L. Keeshin in charge. Fifteen years ago Mr. Keeshin had a mule team and one truck. He worked in and around Chicago hauling produce from daylight to dark and one of his long distance trips in his early career was 36 miles in a two cylinder truck with hard tires, and it took two and one-half days to make the trip. Later he bought another truck and with every dollar he could get he kept on buying equipment.

Today he operates 1,800 units throughout 18 states. His trucks are governed at 35 miles per hour; if his men are fined for violations of traffic ordinances they pay the fine; if they have an accident in which it is their fault they pay for the repairs to company equipment; if they have breakage due to dropping of packages or other carelessness on their part it is their obligation, and why not? Mr. Keeshin gives them good equipment, pays them proper compensation and asks that they deliver the material to its destination as received and with the millions of tons of material which he has handled 98 per cent of it has been handled properly. His operation is no different than the company operating 150 units, but it didn't just happen to be a successful business with him; he studied, worked and specialized in automotive equipment and its operating profits.

The superintendent of transportation should have all material movement directed through his office and each department having any material to move should be provided with a uniform movement order which it could fill out and send to the transportation department which in turn should be turned over to the truck dispatcher who would see that all material covered on the movement order was properly loaded and moved to its destination. This movement order should be signed by the warehouse, lease or district receiving this material and returned to the truck dispatcher. This will show up any shortage, breakage or improper unloading of material as well as time lost and time consumed in making delivery.

No man, and I make this statement without exception or fear of contradiction, should ever be allowed to put his foot on the accelerator of a truck if he has had a drink of liquor. This is particularly true, however, of a responsible corporation's operations. Regardless of how capable a man is to "handle" his liquor, if he has an accident and is hailed before any judge or court he is "drunk" so far as the court is concerned and the responsible corporation is liable for damages. I would rather have men carry dynamite on their trucks than to have them have a drink of whiskey and operate them for me.

Another thing a superintendent of transportation should have jurisdiction over is accidents. All accidents should clear over his desk and should be carefully analyzed; after proper forms have been filled out giving all information in connection with the accident; as to where the fault lies in the accident and, if the operator is not at fault, no penalty should be assessed against him. If he is, he should pay for the repairs. We have at our various division points committees of five men who pass upon and fix accident responsibility and they have proved very valuable and corrective.



There is one item which is becoming more and more essential in the operation of any well organized fleet and that is governors. From the study of several large fleet operators we find the general experience has been an extended life of equipment of at least 25 per cent and a saving during its operation of from 25 to 33⅓ per cent annually. Of course some operators feel it is fine for the "other fellow" but their duties are so important they should not be governed. The general experience as we gather it is that the ungoverned equipment is much more expensive and has more accidents. Trucks should not be allowed to travel faster than 35 miles per hour and then only under the most favorable operating conditions.

Tires properly inflated will give thousands of miles more mileage than haphazard inflation attention. Our inspectors who cover every piece of equipment we have every 30 days check tire pressures and where tire pressure is more than 3 pounds off the proper pressure, demerits are assessed against the operator.

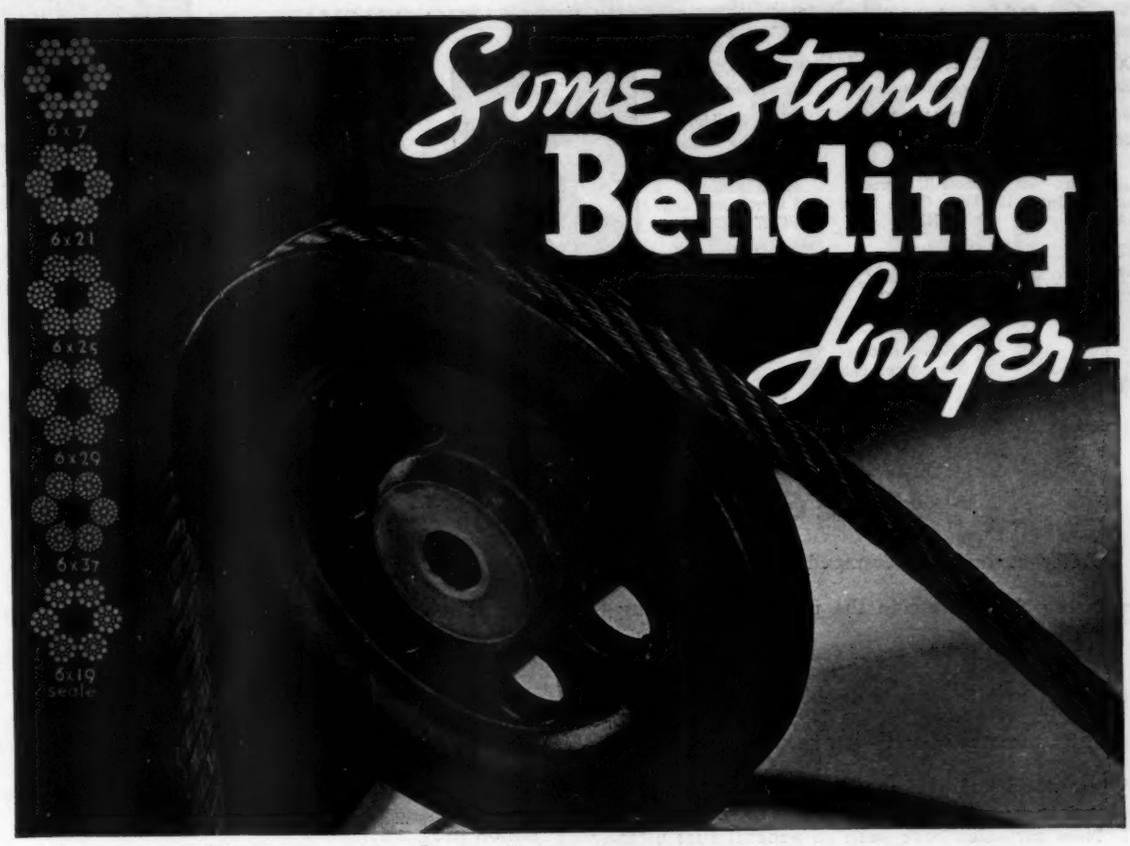
If batteries are allowed to go without the proper water levels demerits are assessed for this; if oil in the crankcase, transmission or differential, is below the proper levels demerits are assessed for this.

Improper Lubrication

Improper lubrication also gets demerits and an accumulation of 40 demerits means dismissal. One might say this is too severe but I disagree. The company ties up from $800 to $5,000 in a piece of equipment and turns it over to a man with full information as to its proper care and operation and pays him a salary to take care of the line of duty he has accepted as well as the proper care of the equipment placed in his hands and if such employe does not appreciate his job and the responsibility of the investment he is operating enough to follow out the rules and regulations of his company then he is not worthy of his hire regardless of his position.

Today millions of dollars are being spent in accident prevention and safety campaigns and if the fleet operators as a whole do not set up regulatory rules and controls then to what avail is this vast expenditure. Accident records show that fleet operations are a very small percentage of the accident total and this substantiates the fact that the individual operator has his own set of rules to cover his operations and these rules are very elastic. In fact they permit him to do anything; however, when he is involved in an accident he has to pay the bill for the repairs.

Some of the statements made in the preceding paragraphs may not set well with some fleet operators, but, in the main, every statement made has been verified through actual experience either in our own operations or thoroughly reliable, well organized and controlled fleet operations. Too many men occupy positions with the title of superintendent of transportation who are not receiving enough compensation nor do they have the jurisdiction necessary to save their employers the amount they are justly entitled to save them and if these men were allowed to take the responsibility to properly control their department and operations their employers would soon see how deserving they were of proper compensation and not until the responsibility and jurisdiction as a whole is given over to transportation men will any oil company fleet operation return the proper saving to its employer.



Select the Rope that Fits Your Job

Continued bending and unbending of wire rope over housing drums and sheaves eventually causes breaking of the crown wires from fatigue. When bending is the primary destructive force in a particular wire rope service, a design should be selected that has the strands made up of a large number of small wires rather than a few heavy wires. When other destructive forces prevent the selection of an ideal design to withstand bending, larger sheaves should be used to render the bending less acute. We will gladly advise you of the design that will give the longest rope life in your service and also furnish tables of sheave-rope-ratios. Write today.

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the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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Increasing Consumption

After having been cramped in the use of motor cars during the depression the public is returning to the highway with new zest. This was shown by the spurt in automobile sales with the first sign of recovery and by the steady and even surprising increase in the consumption of gasoline.

New car sales have been so general that already it is the pre-depression car that looks out of place in the procession. Two years back it was the other way around. The trend has been so rapid that automotive executives are talking of a 5,000,000 car production this year which may well be since every new car is a salesman for another by spreading the desire to own one.

New cars promote mileage as everyone hankers to use a new purchase. This is encouraged by freedom from the grief that follows old cars. Result for the oil industry—increased consumption of motor fuel and motor oil as the reports prove.

If this has been the case during the winter and spring months it will be immensely amplified during the summer motoring season. The Chicago Fair and the San Diego exposition showed how readily people were taking to their cars to see these exhibitions which gave them a goal for long distance touring with the incidental pleasure of seeing a lot of the country in leisurely fashion instead of being whisked in a railroad coach. The success of these fairs proved, moreover, that such "milestones of progress" are as attractive to the new generation as were the past. Fantasy takes shape to house and display modern wonders that intrigue a people always seeking some new thing. Add the ease of hopping into a car and riding right to the grounds with stopovers where you please, and what better vacation program?

This year the Texas Centennial, the continuance of the San Diego exposition and that at Cleveland, Ohio, as well as other state or regional attractions, will offer the prospective motor tourist a variety of goals and routes. The railroads are early with their appeal to the vacationists. Why not the oil companies?

The oil companies have much more to offer than a mere round trip. Never were there so many points of interest, many accessible only by car, that exposition—bent tourists will want to see on the way. Take some of these great projects everybody has been reading about, Boulder dam, the Tennessee Valley, the new work in the national and state parks, easily included by many in the routes to one or other of the big shows.

Gratifying as the growth of gasoline consumption is the competition for gallonage evidences need for more. A vigorous effort by oil companies to promote touring this summer could greatly enlarge the demand and provide a market for surplus material.

It would be a profitable investment both ways.

IDEAL

"Reg. U. S. Pat. Off."

POWER DRIVEN SLUSH PUMP

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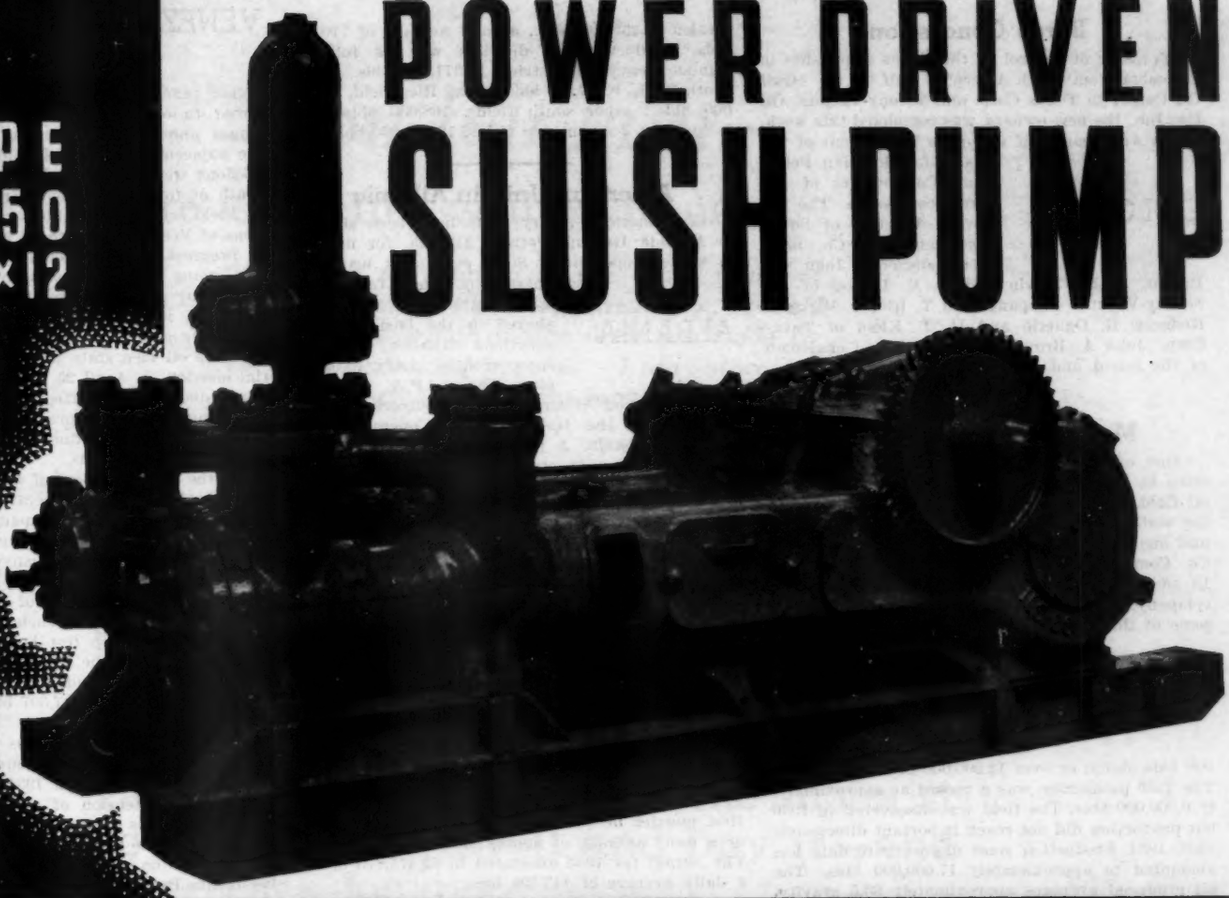


The Power Pump with Power and Fluid Ends capable of rendering the same service as equivalent size steam pump.

Full 150 H. P. at 55 RPM . . . Weight 17,000 pounds . . . Alloy iron fluid end, 2000 pound working pressure . . . Unusually large suction passages and closely spaced suction valves . . . Unrestricted, direct flow discharge passages . . . Ideal wear resistant F-1 Valves . . . Ideal FT Pistons and Rods . . . Slush and water proof crankcase.

Write for Descriptive Bulletin No. 88

THE NATIONAL SUPPLY COMPANY

National

Oil News from Foreign Lands

Barco Concession

Transfer of control of the Barco concession in Colombia from South American Gulf Oil Co. (Gulf Oil Corp.) to Texas Corp. and Socony-Vacuum Oil Co., Inc., the new owners, was completed this week. South American Gulf Co. owns 79 per cent of the stock of Colombian Petroleum Co., owners of the Barco concession. The following directors of South American Gulf Co. have been elected: John A. Brown, A. F. Corwin and G. V. Holton of the Socony-Vacuum company, and T. Rieber, W. S. S. Rodgers, R. Ogarrio and H. T. Klein of Texas Corp. John A. Brown has been elected chairman of the board and T. Rieber president.

COLOMBIA

Mexican Situation Worse

One of the most recent important oil discoveries in Mexico has been that of the Poza Rica oil field, which lies south of the Golden Lane in the state of Vera Cruz. This field was discovered and has been developed by the Mexican Eagle Oil Co. Consolidated Oil Co. also has some production. In addition, Petromex, or Mexican government oil company, has now claimed title to the beds of some of the small tributaries running through the field and is starting an inside test, which may necessitate offset drilling. Current crude oil production in the Poza Rica field is running at the rate of approximately 35,000 bbls. daily, or over 12,000,000 bbls. per annum. The 1935 production was a record at approximately 9,500,000 bbls. The field was discovered in 1930 but production did not reach important dimensions until 1934. Production since discovery to date has amounted to approximately 17,000,000 bbls. The oil produced averages approximately 33.5 gravity. Wells are producing from a formation at a depth of 7,600 feet similar to the El Abra limestone in the Golden Lane. An area of approximately 3,000 acres has so far been proved.

MEXICO

The field has pipe line outlets connecting with the main system of the Mexican Eagle Oil Co., leading either to Tampico or Puerto Mexico, where the company has a large oil refinery.

Next in importance to the Poza Rica field among recent developments is a new field opened by a Standard Oil of California still further south in the state of Vera Cruz. The discovery well was a small producer at a depth of approximately 2,500 feet; the second test, however, was rated at several thousand barrels daily and definitely established the existence of an important reservoir.

Both of the foregoing discoveries are the result of reflection seismograph shooting, and it is stated by oil geologists conversant with Mexico oil development that this method will probably be widely and successfully used in future exploration work, provided political conditions improve sufficiently to justify new development.

The political situation in Mexico in its bearing on oil development is, if anything, growing worse. There seems to be no indication of improvement. Not only is the oil industry weighted down by heavy taxation, but the demands on the part of labor are constantly becoming more burdensome. The present regime appears to encourage the labor organizations in their activities. Numerous court decisions have been rendered against the oil producers in cases involving labor disputes, forcing payment of various sums to the complainants and adding further to the expenses of doing business in the country.

The production of crude in Mexico during 1935 totaled 40,235,000 bbls., a daily average of 110,287 bbls. Production by districts was as follows: Panuco heavy oil district, 10,371,000 bbls.; older south fields, 9,732,000 bbls.; Poza Rica field, 9,543,000 bbls.; other south fields, 168,000 bbls., and Isthmus of Tehuantepec fields, 10,421,000 bbls.

American Units in Albania

Six American rotary units have been shipped to Azienda Italiana Petroli, Albania, for drilling in wildcat operations. Some equipment was purchased by Italy from Germany. American companies shared in the business. The sanctions situation caused a three months' delay in shipping. The A.I.P.A. (Azienda Italiana Petroli Albania—Italian Petroleum Co. in Albania), is the Italian concern operating the wells in Albania. A pipe line from Kuohovo to Valona has been in operation for some time. The first shipment of Albanian crude oil of 4,152 tons was sent to the refineries at Fiume and Marghera. The pipe line passes through Fieri, Roskoveo, Skrafolin and Uji Iftoft.

ALBANIA

Production in Iran

The production of crude oil and natural gasoline in Iran (Persia) for March, 1936, amounted to 663,000 tons, compared with 640,000 tons in February and 661,000 tons in January, and making a total production for the first quarter of 1936 of 1,964,000 tons. On the basis of 7 bbls. per ton, the production for the first quarter of 1936 is equal to 13,748,000 bbls., or a daily average of approximately 151,000 bbls. The output for 1935 amounted to 52,413,879 bbls., a daily average of 143,599 bbls.

IRAN

Venezuelan Oil Outlook

Oil men who have recently returned to this country from Venezuela state that conditions since the election of General E. Lopez Contreras as president have been quiet, and that there is every indication of continued stability under the new regime. Confidence has been further strengthened by the favorable attitude assumed by the new governor of the state of Zulia, embracing the Maricaibo Lake district, toward the oil industry. It is admitted that the oil companies operating in Venezuela may be subject to increased costs, as a result of demands made by labor for higher wages, and higher taxes. In fact labor, for the first time allowed to organize openly, is said to be asking wages approximately double those now paid in the adjacent Trinidad oil fields. Taxes on oil concessions were increased late in 1935, prior to the death of former President Gomez.

VENEZUELA

Field work is continuing as usual in all portions of Venezuela where oil development has been in progress. Oil shipments out of Venezuela are also going forward normally. During the past week four cargoes containing approximately 450,000 bbls., were shipped from eastern Venezuela, this being slightly above normal.

Some oil men state that prior to the presidential election on April 25, disturbances in the Lake Maracaibo districts affected production and that accordingly the April production figures for Venezuela will show a decline equal to about two days' output, or 700,000 bbls.

In the annual report of the British Controlled Oilfields, Ltd., for 1935, mention is made of higher prices realized by the company for its crude oil production in Venezuela during that year. Drilling operations of the company in Venezuela were confined to one rig employed in drilling a well on the southern boundary of the Buchivacoa concession. The well has reached a depth of 7,000 feet. A further deep test is to be drilled on the southern flank of the El Mene shallow field.

The company's crude oil output in Venezuela for 1935 amounted to 847,507 bbls., compared with 995,391 bbls. in 1934.

British Controlled also has substantial properties in Trinidad, where it produced 1,641,398 bbls., against 1,345,302 bbls. in 1934. The company has obtained an extension of production in the Palo Seco field and is expanding its drilling operations in this area. The company's operations in Trinidad are carried on through a subsidiary, Trinidad Petroleum Development Co., Ltd.

Testing core specimens in Ishambayer, Sterlitamak district, Bashkirian, U.S.S.R.

(Sovfoto)

You tell him—

Here is a letter written to us:

> *"Referring to your ad in the April issue of Industrial and Engineering Chemistry, I would like to know which motor fuels are made by the Dubbscracking process. I am interested only as a private motorist looking for better performance in his car"*

Here is what it means to you:

If you are not making Dubbscracked gasoline you ought to be because motorists are asking for it

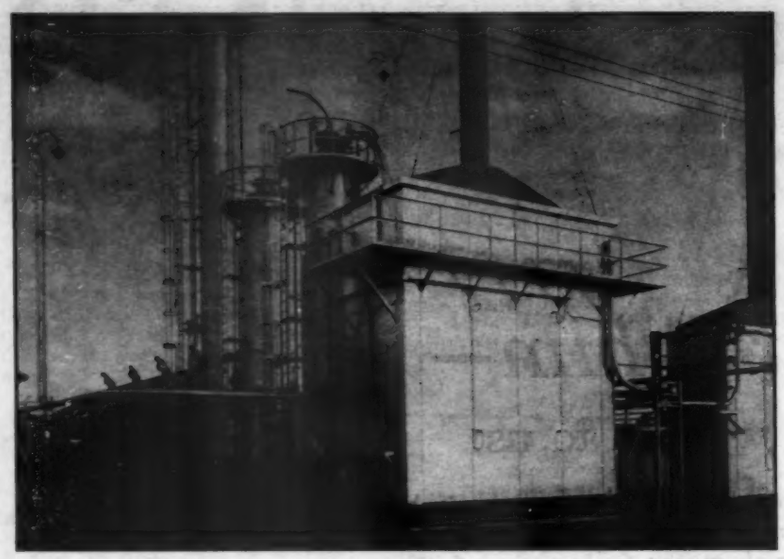
If you ARE making Dubbscracked gasoline you ought to tell the motorist so he can identify it and buy it—and come back for more

Every motorist is "looking for better performance in his car"

Dubbscracked gasoline gives him the best—and brings more profits to you

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor



The heavy oil cracking furnace, Equiflux type, with reaction chamber, flash chamber, pump house and control house in background. Corner of light oil furnace at extreme right, all in the plant of the Home Oil Refining Co.

New Dubbs Uni… Yield, Increases… Twenty-Seven…

It was straightrun gasoline, accumulating month by month, until it reached a total of 1,000,000 gallons, that brought the Home Oil & Refining Co. to a decision to rebuild its skimming plant at Great Falls, Mont.

The plant has been rebuilt. A Dubbs cracking unit with auxiliaries has been added that places it in the front rank of up to date refineries. This unit employs the new heating principles embodied in the Equiflux furnace. Among other important new features the refinery has the Day process for treating gasoline which was developed by Universal Oil Products Co.

The original refinery was built in 1930 to run crude oil produced by W. E. Rice in the Pondera, Montana, field.

Characteristics of the Pondera crude are shown in Table 1.

The plant consisted of a 1,000-bbl. a day crude distillation unit comprising a pipe still, flash chamber and fractionating column with the necessary heat exchangers, condensers and other auxiliaries. There was a continuous doctor-treating plant for the gasoline, a batch agitator for treating tractor distillate and rundown and storage tankage. Two small boilers furnished the power.

The crude was charged through a vapor line heat exchanger into the oil-fired pipe still and thence into the flash chamber. From the top of the flash chamber the vapors passed into the fractionating column while the residue—heavy fuel oil—was continuously withdrawn from the bottom.

The gasoline produced had characteristics as shown in Table 2.

In addition to straightrun gasoline, the refinery produced tractor distillate, gas and fuel oil, all of which found a market near home at good prices in 1930 and the years following.

The yield of the various products was approximately as shown in Table 3.

The gasoline was marketed primarily through the company's own stations and secondarily through jobbers and farmers' cooperative distributing companies, mostly in Montana. The farmers bought the tractor distillate cash-and-carry, hauling it away from the refinery in steel barrels. The gas oil, blended with part of the distillate to reduce it to the proper viscosity, was sold as fuel for home-heating burners in town, while local industries absorbed the heavy fuel oil.

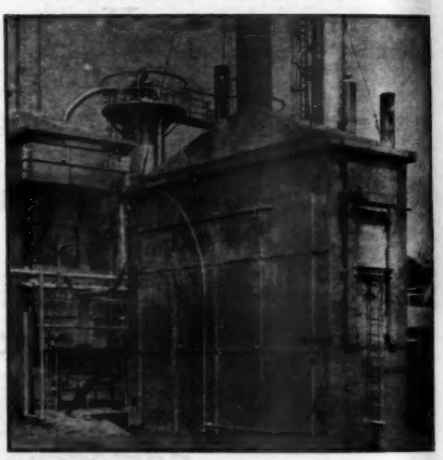
Later, when the management recognized the enormous market for road oil which was afforded by the hundreds of miles of dusty, gravel roads in Montana and nearby states, they installed another tower to reduce the heavy fuel to road oil specifications.

Sales of road oil went up, the other products held their own but gasoline sales started downward. Stocks increased in exact proportion as gallonage decreased. The decline in sales was not due to any falling off in quality—it was the same gasoline—nor to any let down in the ability or the efforts of the Home sales force. It was because competitors' gasoline was getting better.

The Home gasoline had an octane rating of 43 and Montana motorists—or their engines—had tasted better gasoline, higher in antiknock value, and they liked it.

The octane appetite of the motorists was being satisfied partly with Dubbs cracked gasoline made by a competing Montana refiner, and mostly with cracked gasoline brought in from other states by major companies.

Despite the loss of gasoline gallonage, the sale of the other products might have kept the company going, except for the fact that the increasing stocks of gasoline gradually filled refinery storage. It was impossible to sell the gasoline even at cut prices. Operations were brought practically to a standstill.



The two cracking furnaces: Right, the light oil furnace; left, heavy oil furnace

The company's affairs were at this point when the Ralph M. Parsons Co. was called in. The Parsons organization made a careful analysis of the entire marketing situation.

It was obvious that only by producing gasoline of high antiknock value could the company begin to regain its lost gallonage, and it was also learned that popular taste in Montana gives preference to clear, water white gasoline of good odor.

Low gum potential also is a necessity because

South end of control room showing chart desk, indicating potentiometer with five rotary switches, miscellaneous recording instruments, controllers and pressure gauges. The entire unit is controlled from this room. Door in right foreground opens into cold oil pump room

TABLE 1—CHARACTERISTICS OF PONDERA CRUDE

Gravity, °A.P.I.	31.5
I.B.P., °F.	140

Pct. over	°F.
5	218
10	250
20	324
30	391
40	463
50	544
60	643
70	684
80	702
90	718
95	...
E.P.	...

Raises Gasoline Octane Rating Points

By PAUL TRUESDELL

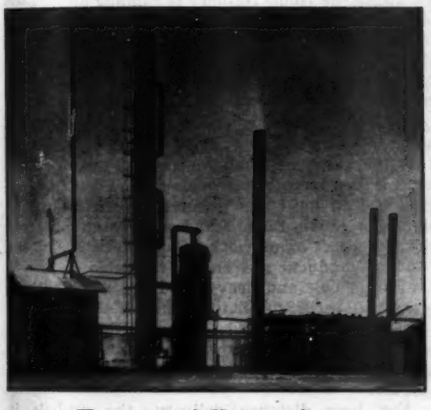
View of hot oil pump room showing direct-acting light hot oil pump, 14" x 4½" x 12", in foreground and steam engine driven heavy hot oil pump in background, 3¾" x 12", all a part of the new cracking installation

the length and severity of Montana winters enforce long storage periods for gasoline.

The Dubbs cracking process and the Day treating process offered the complete answer to all the gasoline problems.

The next question was, what secondary products could be made and sold to the best advantage. Conditions were peculiar. The railroads, a dependable outlet for fuel oil in some territories, offered no help here. They would not buy fuel at Great Falls because it is off the main trunk lines. The coke market, although potentially great, was undeveloped. Quick action was needed, and the officers of the company made definite plans.

The Home refinery had developed a market and established a reputation for road oil, and to carry the manufacture of this product farther and make good asphalt seemed a logical step.



The original Home refinery

Parsons submitted a plan and a proposal, and they were accepted.

On September 29, 1934, a contract was signed with the Parsons company for rebuilding of the refinery in line with Parsons recommendations.

The contract called for the construction of a 2-coil Dubbs selective cracking unit—light and heavy oil furnaces—to crack 750 bbls. a day of topped crude and straightrun gasoline, and a vacuum column to reduce the road oil to specification asphalt. The job included an absorber and stabilizer, the Day treating unit, two 250-horsepower water tube boilers with office, warehouse and shop building.

The most urgent need was to produce good gasoline with which a start could be made to rebuild the Home gallonage, and the quickest way to do that was to reform the straightrun gasoline in the storage tanks.

TABLE 2—DATA ON GASOLINE PRODUCED

Gravity, °A.P.I.	59
I.B.P.	120
Pct. over	°F.
5	156
10	170
20	204
30	230
40	252
50	273
60	295
70	318
80	340
90	362
95	379
E.P.	402
Octane No.	43

Consequently, the first step in the construction program was the building of the light oil furnace so that the reforming job could be begun as soon as possible. Within a very short time this furnace was in operation, converting the 43 octane straightrun gasoline into 70 octane Dubbs cracked gasoline, which the sales department could sell and did sell, while construction of the rest of the refinery went forward.

Both the light and heavy oil furnaces are of special new design.

Because of the high sulfur content of the crude, alloy piping was used throughout the plant and the reaction chamber, flash and fractionating column of the Dubbs unit were metallized with aluminum.

All the original equipment is still in service, although it has been somewhat modified. The crude oil is charged through a vapor line heat exchanger to the furnace. Installation of the vacuum tower made the old flash chamber unnecessary so it has been converted into a boiler feed water heater.

As at present operating, the oil and vapors from the furnace are flashed into the bottom of the fractionating tower from which are taken off:

Straightrun gasoline of 120° F. initial and 400° F. endpoint.

Naphtha, 475° F. endpoint.

Kerosene (tractor) distillate, 525° F. endpoint.

Light gas oil or diesel fuel, 34-36° A.P.I., 650° F. endpoint, 55 cetane number.

Heavy gas oil.

Topped crude.

The straightrun gasoline goes to storage whence it is picked up later and fed into the stream going to the Dubbs light oil furnace. Part of the naphtha is used to cut back the asphalt when a "rapid-curing" product is desired and the remainder goes to the light oil cracking furnace.

The distillate is sold to the farmers as before. The light gas oil is sold or cracked according to market conditions.

The heavy gas oil, together with the topped crude, goes into the Dubbs fractionating tower.

A side stream from the Dubbs tower goes to the light oil cracking furnace, along with the light fractions from the other tower, and a stream from

View of cold oil pump room showing auxiliary cold oil pumps. Space is provided in foreground for additional pumps when needed. Door in left background leads to hot oil pump room, as another important unit of the Home Oil Refining Co. installation

the bottom of the Dubbs tower goes to the heavy oil cracking furnace.

The heavy oil furnace operates under lower temperature and pressure than the light oil furnace.

The streams from both discharge into the reaction chamber, thence into the flash chamber, thence into the fractionating column.

The gasoline stream is condensed, passes through the gas separator, is stabilized and then goes to the Day treater.

TABLE 3—PERCENTAGES OF VARIOUS PRODUCTS

Product—	Per cent
Straightrun gasoline	29
Naphtha	7
Distillate	15
Gas and fuel oil	47
Loss	2

TABLE 4—PRESENT PLANT YIELDS

	Per cent
Gasoline	58
Naphtha	2
Distillate	10
Cracked residue	20

TABLE 5—PRESENT GASOLINE CHARACTERISTICS

Gravity, deg. A.P.I.	61
	Deg. F.
I.b.p.	80
5	112
10	128
20	154
30	184
40	514
50	240
60	264
70	291
80	315
90	358
95	375
Endpoint	385
Recovery, per cent	96
Octane, Motor Method	69–71
Color	30+
Reid vapor pressure, pounds	10
Induction period, minutes	260+

TABLE 6—LABORATORY TEST RESULTS ON RESIDUAL PRODUCTS

	Cracked resid.	Asphalt resid.	Road oil
Per cent of crude	20–22	12–14	14–16
Gravity, deg. A.P.I.	2–3	2–3	4–6
Vis. S.F. @ 122°	450–600		
Vis. S.F. @ 140°			500–650
B.S.&W., per cent	0.10		
Flash, deg. F.	250		
Fire, deg. F.	300		
Penetration @ 77° F.		25–100	90–100
Ductility @ 77° F.		120+	
Solubility in CCl_4, per cent		99.65	99.65
Solubility in CS_2, per cent		99+	99+
Distillation:			
Per cent @ 600° F.			9
Per cent @ 680° F.			13

When the new light oil furnace was first put in operation as a reforming unit, the bottoms from the fractionating tower of the distillation unit went to an asphalt heater and then into the vacuum tower to be reduced to road oil.

After the straightrun gasoline had all been reformed into a high octane product and the entire cracking unit was in service, the equipment was reconnected so the residue from the flash chamber now goes directly to the vacuum tower where it is reduced to penetration asphalt.

Typical yields of the plant as at present operating are shown in Table 4.

The Dubbs cracking operation has exactly doubled the yield of gasoline from the crude and it is all cracked high antiknock gasoline. The yield is 58 per cent as compared with 29 per cent under the old operation. This is an exceedingly high yield when it is considered that about 12 per cent of the crude is taken off in the naphtha and distillate cuts before it goes to the cracking coils.

The Home gasoline today has the characteristics shown in Table 5.

The Dubbs unit has demonstrated its ability to run consistently above its capacity rating and the calls of the sales department for more cracked gasoline are so insistent that topped crude from a small nearby skimming plant is being purchased to supplement that produced in the refinery.

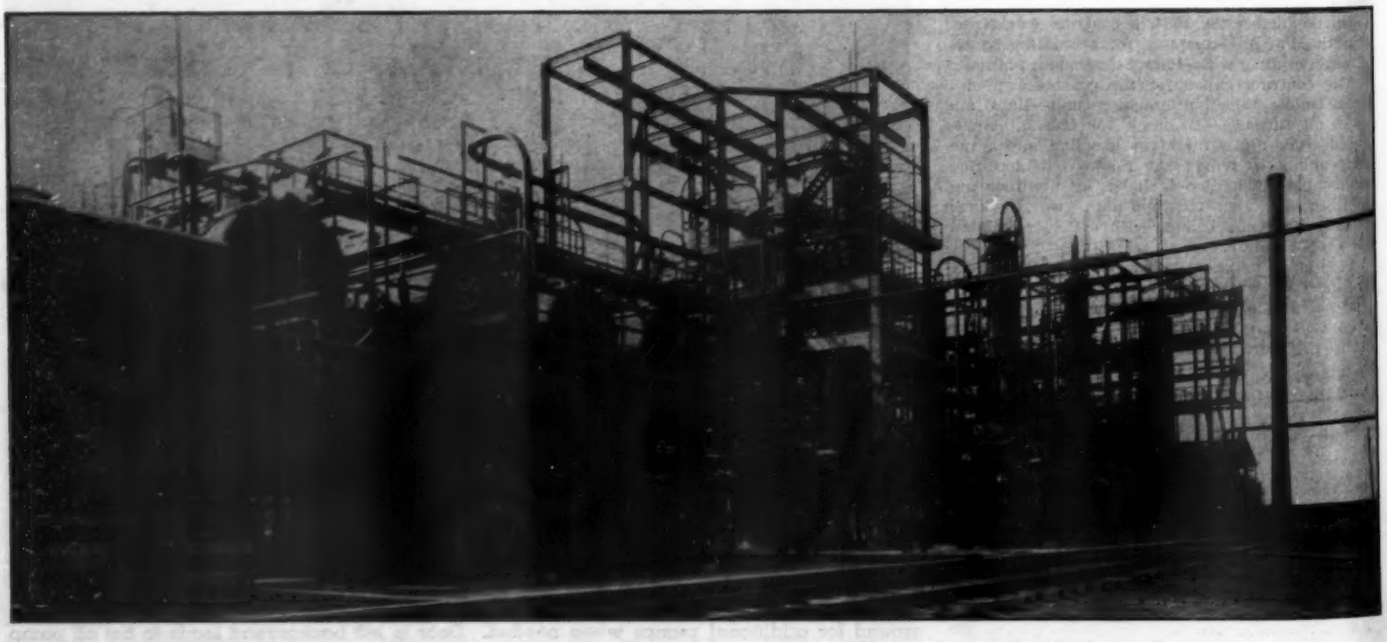
Today the Home refinery is running about 1,500 bbls. of crude oil daily, and the flexibility of the installation is so broad that it makes a wide variety of products which can be and frequently are varied to meet operating conditions and market requirements.

Among the products made are two grades of naphtha, two grades of tractor distillate, diesel oil, domestic furnace oil and heavy gas oil, together with six or more grades of road oil and asphalt produced to meet the different specifications of Montana, North Dakota and other states for various types of road work. Characteristics of the residual products are shown in Table 6.

The asphalt and heavy road oils must be kept hot at all times and shipped hot. Exhaust steam from the pumps is used to heat them, and an old boiler, operated under low pressure, has been connected up to furnish additional steam for this purpose.

For long distance delivery, the asphalt is shipped in tank cars, equipped with heating coils, and for short distances it is hauled hot in tank trucks and dumped directly on the road.

Air view of the Home refinery as it looks after completion of the construction work

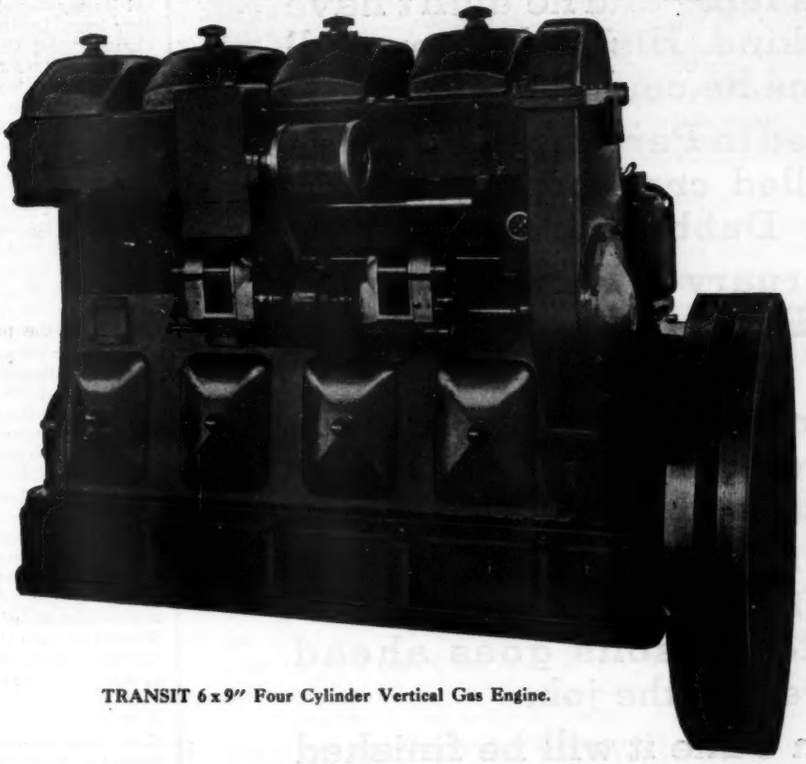


Duo-Sol plant for solvent extraction recently completed at Philadelphia plant of Gulf Refining Company

See this remarkable engine at the Tulsa Show—

TRANSIT

VERTICAL GAS ENGINES



TRANSIT 6 x 9″ Four Cylinder Vertical Gas Engine.

TRANSIT Vertical 6 x 9″ Gas Engines operate without the destructive wear and tear inherent in the "High Speed" type of engine. This 600 r.p.m. medium speed engine is just right to insure an even torque at all times—free from jars, jerks and shocks to the driven equipment. This makes for longer life and lower maintenance costs.

Oil field pumping equipment, generators and other driven units not only last longer, but cost less to operate when driven by TRANSIT Vertical Gas Engines.

These Gas Engines are built with two, three, four, six or eight cylinders, ranging from 20 to 128 H.P. Any type of power take-off can be supplied.

Write for Bulletin 430-A, which describes these engines in detail.

NATIONAL TRANSIT PUMP AND MACHINE CO.

OIL CITY, PENNSYLVANIA

NEW YORK - PHILADELPHIA - CHICAGO - CLEVELAND - PITTSBURGH - LOS ANGELES - HOUSTON - TULSA

Standard Supply and Hardware Company
New Orleans,
Louisiana

The Republic Supply Company of California
2122 East Seventh Street,
Los Angeles, California

F. C. Richmond Machy. Co.
320-326 West Second South St.,
Salt Lake City, Utah

Reeves & Skinner Machy. Co.
2211 Olive Street,
St. Louis, Missouri

Pratt-Gilbert Co.
Phoenix,
Arizona

Frick-Reid Supply Corp.
108 N. Trenton Ave.,
Tulsa, Oklahoma

More selling time

Time is money, we are told, but how much money?

How much is selling time worth to a refiner in the spring motoring season?

That depends on whether he has the right kind of gasoline to sell.

A certain wise refiner recognized this fact—and he didn't have the right kind. His tanks were full of gasoline he couldn't sell.

He called in Parsons to redesign his so-called cracking unit to operate the Dubbscracking system.

On February 6, Parsons went to work. He made some quick changes.

On March 1, his rebuilt furnace went to work reforming the knocking gasoline—boosting its octane value 22 points.

The refiner is selling that gasoline while Parsons goes ahead with the rest of the job.

Early in June it will be finished and the plant will be cracking 1500 barrels a day of oil—any kind of oil—into Dubbscracked gasoline.

How much is selling time worth to that refiner now?

How much would it be worth to you?

PARSONS

THE RALPH M. PARSONS CO.

310 SOUTH MICHIGAN AVENUE
CHICAGO

4800 SANTA FE AVENUE, LOS ANGELES

A.S.T.M. Sectional Committee on Petroleum Announced

The personnel of the sectional committee on petroleum products and lubricants operating under the procedure of the American Standards Association with the A.S.T.M. as sponsors announced this week by T. A. Boyd of the General Motors Research Corp., chairman.

The committee as appointed by T. A. Boyd follows: T. E. Allen, secretary, American Automobile Association; C. A. Lunn, Consolidated Gas Co., representing American Gas Association; C. B. Hamilton, Hamilton Gear & Machine Co., representing American Gear Manufacturers Association. (Alternate, J. H. Flagg, Watson-Flagg Machine Co.); K. G. Mackenzie, The Texas Co., representing American Institute of Mining and Metallurgical Engineers. (Alternate, G. H. Taber, Jr., Sinclair Refining Co.); John Hulst, vice president, United States Steel Corp., representing American Iron and Steel Institute; H. F. Tapp, Gilbert & Barker Manufacturing Co., representing American Oil Burner Association; R. P. Anderson, American Petroleum Institute, also represented by B. R. Carney, Shell Union Oil Corp., K. G. Mackenzie, The Texas Co., J. B. Rather, Socony-Vacuum Oil Co., Inc., T. H. Rogers, Standard Oil Co. (Indiana), J. B. Terry, Standard Oil Co. of California; G. B. Karelitz, Columbia University, and W. F. Parish, consulting lubrication engineer, representing American Society of Mechanical Engineers. (Alternates, H. J. Masson, chemical engineering department, New York University, and S. J. Needs, research engineer, Kingsbury Machine Works, Inc.); T. A. Boyd, General Motors Corp., and T. G. Delbridge, Atlantic Refining Co., representing American Society for Testing Materials; E. J. Fraser, United Railways & Electric Co., representing American Transit Association; William Elmer, Pennsylvania Railroad, representing Association of American Railroads (Engineering Division); J. B. Macauley, Chrysler Corp., representing Automobile Manufacturers Association; Byron Godshall, Ingersoll-Rand Co., representing Compressed Air Institute and Hydraulic Institute; M. J. Reed, secretary, Diesel Engine Manufacturers Association; Harold Farmer, Philadelphia Electric Co., representing Electric Light and Power Group. (Alternate, J. O'R. Coleman, Edison Electric Institute); M. B. Chittick, Seymour Manufacturing Co., representing National Association of Purchasing Agents; H. C. Dickinson, Heat and Power Division, representing National Bureau of Standards; M. H. Steinmetz, General Electric Co., and J. G. Ford, Westinghouse Electric & Manufacturing Co., representing National Electrical Manufacturers Association. (Alternate, G. W. Zabel, Fairbanks, Morse & Co.); A. H. Nuckolls, Underwriters Laboratories, Inc., and N. J. Thompson, Associated Factory Mutual Fire Insurance Cos., representing National Fire Protection Association. (Alternate, A. R. Small, Underwriters Laboratories, Inc.); MacLean Houston, United Refining Co., representing National Petroleum Association; W. F. Lowe, secretary, National Gasoline Association of America; A. L. Beall, Wright Aeronautical Corp., and A. W. Pope, Waukesha Motor Co., representing Society of Automotive Engineers; L. I. Shaw, Western Electric Co., representing Telephone Group. (Alternate, T. C. Smith, American Telephone & Telegraph Co.); A. J. Kraemer, U. S. Bureau of Mines; Officer-in-charge, Design Division, Specification Section, Bureau of Engineering, representing U. S. Navy Department; T. W. Smith, Holabird Quartermaster Depot, representing U. S. War Department; D. G. Proudfoot, Phillips Petroleum Co.

Engineers to Hear Doctor Speller

Dr. F. N. Speller, director of the department of Metallurgy and Research, for the National Tube Co., will address members of The Engineers Club of Tulsa and friends Tuesday night, May 12th at 8:00 p.m. in the Tulsa Building.

Dr. Speller is the recipient of many honors. He has the unique distinction of having served on the A.S.T.M. Committee A-L on Steel longer than any other member of the organization. He is the author of a comprehensive book, entitled "Corrosion—Causes and Prevention."

OPERATING IDEAS

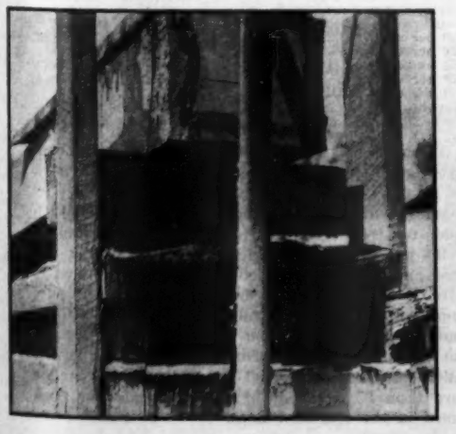
Guy Wire Clamp

To tighten guy wires on rigs two pieces of 2x4 are secured and two spikes driven through them about 6 inches apart but not driven home. This leaves a space about 3/4-inch wide between the two pieces of timber and the guy wire is then wound over

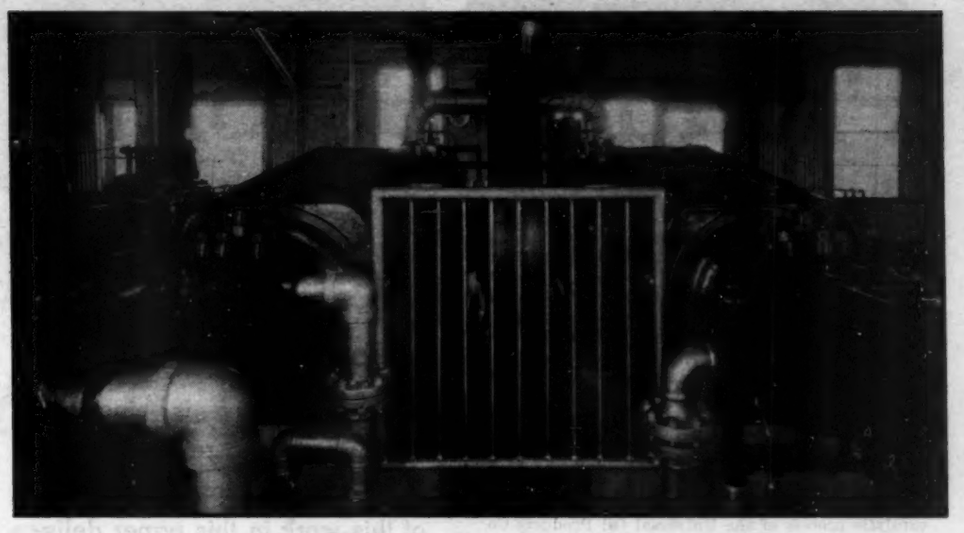
the two nails until sufficient slack is taken up. The guy wire clamp is then pulled parallel with the wire and another nail driven through both pieces of timber near the lower end to keep the wire from unwinding.

Flume for Cooling Mud

In Rodessa, La. oil field temperatures in the producing formations exceed 190 deg. F. and mud fluid used in drilling will become so hot that it is necessary to cool it before again pumping it into the well. Many devices are used for this purpose and the accompanying cut shows detail of one end of a flume down which the hot mud flows. There are really two flumes, one above the other with screen cloth between. The bottom of the upper flume is drilled with 2-inch holes through which the mud escapes to strike upon the screen and then run through it into the lower flume. Rough lumber is used to construct this equipment and in the picture the end of the upper flume is shown complete with the screen below but only the upper part of the lower flume is shown. The lower flume is of the same design as the upper one except it is narrower. These flumes are about 100 feet long.



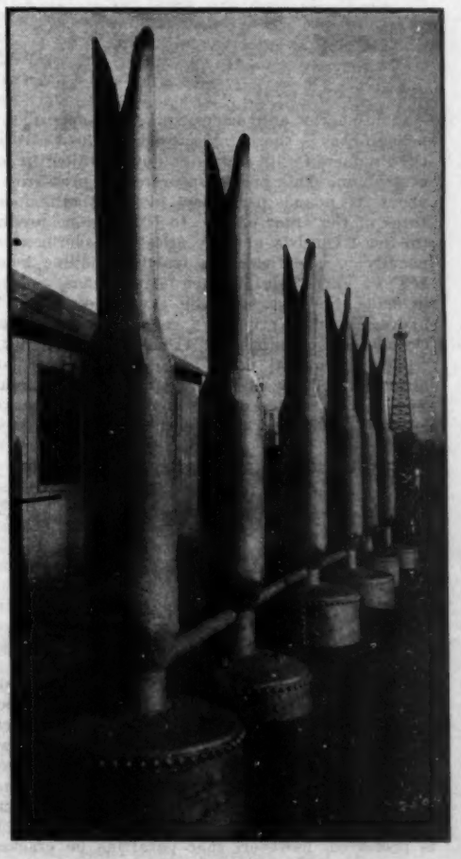
Safety Gates Installed Between Compressor Cylinders



One large oil company operating a gas repressuring plant in the Fairfax field has erected safety gates at the end positions between the compressor cylinders. The frame of the gate is constructed from 1-inch pipe and the uprights from sucker rods, the gate being welded at all joints. The installation of this gate makes it almost impossible for a person to be injured by the revolving flywheel and when the engine is to be repaired the gate can be removed by loosening the two bolts. Cost of constructing the gate is very nominal since old pipe and sucker rods are used. Also they are more easily kept clean than some screens used for this purpose and, due to the simple type of clamp used, are more easily removed.

Unusual Engine Mufflers

One oil company operating a gas lift plant in the Oklahoma City field has constructed mufflers which have proven to be very effective in silencing the exhaust and yet cause no back pressure on the engines. The mufflers consist of a 40 by 60-inch vessel, 4 feet of which is buried underground, and a 6-foot stack of 8-inch pipe, dovetailed at the top. A 3-foot section of the 8-inch pipe is covered with a 12-inch sleeve, drawn together at the ends and welded to the 8-inch. Inside the sleeve the 8-inch is perforated to act as a muffler. As a means of cooling the exhaust, 3 feet of water is allowed to stand in the base of the vessel. The pipe is dovetailed at the top to damped the sound by allowing gases to escape more gradually.



Polymerization of Gases to Produce Gasoline

By C.R. WAGNER
Pure Oil Co.

N.P.A. The polymerization of petroleum gases is being commercialized at a rapid rate and the author summarizes the status of this work in this paper delivered before the Cleveland, Ohio meeting of the N. P. A.

The existence of large quantities of olefinic gases produced by high temperature cracking processes during the last decade has been the impelling factor behind the development of current polymerization processes. By no stretch of the imagination could such huge volumes of olefines be absorbed by the chemical industry. As a conservation measure, to reduce the rate of exhaustion of our crude oil reserves, and as a means of producing a high octane value blending fuel polymerization is well justified.

There are today three polymerization processes available to the public: (1) The thermal process developed by the Phillips Petroleum Co. (2) The catalytic process of the Universal Oil Products Co. (3) The thermal process of the Pure Oil Co.

The Phillips Company have a plant operating at Borger, Tex., processing, it is understood, a natural gas fraction consisting essentially of butanes. Pressures of 1,000 to 3,000 pounds per square inch are employed at temperatures of 950° to 1,100° F. Characteristics of the product as reported by Keith[1] are shown in Table 1.

TABLE 1—PRODUCT FROM COMMERCIAL PLANT ON BUTANE FEED (CLAY TREATED)

		Pct.	
A.P.I. gravity	61.4	50	180
A.S.T.M. distillation, °F.		60	203
Initial B.P.	95	70	229
5 per cent	114	80	271
10 per cent	120	90	361
20 per cent	133	95	425
30 per cent	147	E.P.	449
40 per cent	163	A.S.T.M. oct.	79

Phosphoric anhydride, suitably supported in pellet form, is the catalyst used by the Universal Oil Products Co. in a process now installed in several plants. This process operates at pressures of about 200 pounds per square inch and at temperatures of the order of 400° to 500° F. The product produced consists almost entirely of olefines and usually it is deficient in fractions boiling below 158° F. Very little polymer heavier than gasoline is made, however, and the raw product can be hydrogenated to produce a very high octane fuel. Commercial quantities of crude iso-octane (2,2,4-trimethyl-pentane) made in this manner are now being offered by at least two major companies. The characteristics of this material are reported by Egloff[2] in Table 2.

TABLE 2—CHARACTERISTICS OF PRODUCTS

	Regular polymer	Selective polymer (di-isobutene)	Hydrogenated selective polymer
A.P.I. gravity	67.0	64.5	71.0
A.S.T.M. distillation			
Initial boiling point	191	212	206
10 per cent	156	213	208
20 per cent	178	214	209
50 per cent	212	215	210
90 per cent	314	216	213
Endpoint	405	238	244
A.S.T.M. octane No.	83	84	99

In the Pure Oil Co. process conditions are modified to suit the character of the charging stock available and the nature of the product desired. Any gases consisting of hydrocarbons having two or more carbon atoms per molecule may be used as charging stock, and a variety of products ranging from pure aromatics to material resembling vapor phase cracked distillate may be obtained. It is preferred, however, that paraffins be cracked in one stage and that olefins be polymerized in a separate stage, using in each step those conditions best designed to secure the desired results. Two plants have been constructed and operated over the period of the last five years: one a semi-commercial plant producing about 100 bbls. of gasoline per day, the other a larger unit producing about 500 bbls. per day. A third plant was erected abroad about three years ago, but operating data have been withheld, since the plant is government property.

The small plant just referred to has operated on a variety of gases ranging between straight absorber exit gas as one extreme and stabilizer reflux as the other. Analyses of the two gases are shown in Table 3.

Without pyrolysis of the paraffins present yields of gasoline as high as 3.25 gallons per thousand cubic feet were obtained on the absorber gas and as much as 9.0 gallons per thousand from the stabilizer reflux. These yields could be increased materially by decomposing the paraffins and then polymerizing the olefins so produced.

TABLE 3—ANALYSES OF GASES

	Absorber gas	Stabilizer reflux
Methane, hydrogen, etc.	38	4
Ethylene	25	2
Ethane	14	....
Propylene	17	27
Propane	3	....
C_4 compounds	3	67
Specific gravity	0.99	1.50

In the larger plant mentioned the feed stock was prepared by concentrating the olefins by means of absorption and redistillation under pressure. This charging stock was then delivered as a liquid to the poly furnace, where it was heated under pressure to reacting temperatures and then delivered to the reaction coil. The heat generated by the reaction caused a further rise in temperature of about 50° F., and this temperature was controlled by circulating air over the coil.

The characteristics of the products produced in these two plants are given in Table 4.

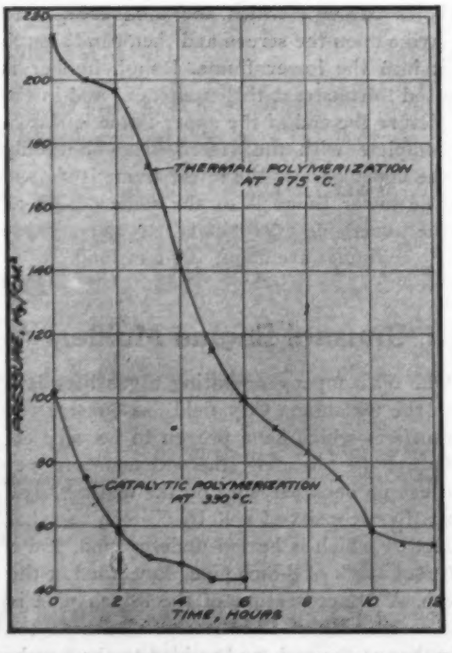
TABLE 4—CHARACTERISTICS OF PRODUCTS

	Raw distillate		Finished gasoline	
	Small plant	Large plant	Small plant	Large plant
Gravity, A.P.I.	54.0	57.3	57.0	58.5
Initial	84	85	90	92
10 per cent	109	124	127	120
20 per cent	135	151	145	148
50 per cent	207	211	200	206
80 per cent	325	329	281	335
Endpoint, 90% at	418	438	398	395
A.S.T.M. octane No.	...	75	77	79

A very interesting fact discovered early in this work was that aromatic hydrocarbons could be produced by polymerization of olefinic gases at much lower temperatures than by pyrolysis of paraffinic gases or gas oils. Operating at a temperature of 1,175° to 1,225° F., a product was obtained which had an A.P.I. gravity of 20 to 25 and which contained 75 to 80 per cent of 400° F. endpoint distillate. This gasoline boiling point material had an A.P.I. gravity of 31 to 33 and, after acid treating to remove diolefines present, practically pure benzene, toluene, xylene, and naphthalene were separated by fractionation. Several hundred barrels of such material have been produced and the installation of a commercial-sized unit is under consideration.

	Raw condensate	Gasoline fraction
Gravity	25.1	32.9
Initial	90	148
10 per cent	173	180
20 per cent	185	190
50 per cent	258	220
70 per cent	354	254
90 per cent	...	348
Endpoint, 73% at	418	413
Octane No.	...	99

It has been reported that it is possible to convert 90 per cent or more of a paraffin gas, such as propane, into the corresponding olefin by means of suitable dehydrogenating catalysts. With yields for the polymerization step varying from 75 to 90 per cent, depending upon the product desired and the process used, it is easy to see what a tremendous force may be exerted upon the fuel supply of the country and its cost to the public. Conservative estimates on the possible poly gasoline producible from refinery and natural gases indicate at least 4,500,000,000 gallons per year or more than 25 per cent of the total gasoline consumed in the United States.



Rates of reaction reported by V. N. Ipatieff before the Kansas City meeting of the A.C.S. when subjecting propylene to conditions of polymerization with and without the use of a phosphoric acid catalyst

[1]Keith and Ward, 16th meeting, American Petroleum Institute, Los Angeles, Calif., Nov. 12, 1935.
[2]Egloff, Gustav, Kansas City meeting, Petroleum Division, American Chemical Society, April 13-17, 1936.

Location 1, View A—About center, west line sec. 18-26-17, showing natural pool in Big Creek with log dam recently put in place By Forest Oil Co. Note steep banks and exposed location of pumps and intake lines

Location 1, View C—Riffle in Big Creek, between location 1 and location 2, showing amount of water in stream when Forest water station was not running. Fall through this riffle was 0.4 feet and the water ankle deep

Location 2—Confluence of Big Creek with Verdigris River. Trees and bushes indicate normal stage is but little higher than at present. Waters edge here was (March 29, 1936) 1.6 feet lower than pool in Location 1

Flooding Water Resources in Nowata, Oklahoma, Stripper Well Territory

By ALEXANDER B. MORRIS
Petroleum Engineer

With the success of water flooding operations in the shallow fields of the Mid-Continent a proven fact, the early extension of this method of oil production to the great Bartlesville area of Nowata County has become a certainty. Already several flooding projects are under way in this region, and contiguous operators will soon be forced to adopt this method in order to protect the reserves of unrecovered oil under their leases. Thus far a few operators interested in this field have undertaken to assure themselves of an adequate supply of suitable water, and given consideration to where a sufficient supply can be obtained for large scale operation.

The total quantity of water required to flood this field is stupendous. The producing area covers some 50 square miles all of which, at least potentially, will be suitable for flooding. The sand averages 30 feet in thickness, with an average porosity of 19 or 20 per cent, and in many parts of the field, these averages are greatly exceeded. Using the average figures, it will require some 40,000 bbls. of water per acre to completely flood the Bartlesville sand in this region, and if only half of the producing area of the field is found to be amenable to this method of production, a total requirement of 640,000,000 bbls. is indicated. If it is assumed that the flooding operations will require 10 years to complete, and the daily demand will be constant at the average amount throughout that period, a daily demand of 174,800 bbls. is indicated. That this enormous demand for water will be exceeded seems inevitable, since, with the spread of the flood, there will come a time when nearly every flood property in the field will be in the stage of maximum input at the same time. It is altogether within reason that the maximum daily demand for flooding water in this field will exceed 300,000 bbls.

Where is this ocean of water to come from? Certainly no one familiar with the local streams of the Mid-Continent can expect to obtain, regularly, anything like this quantity of water from them during most of the year. And it is essential to the fullest success of a water flood, that it be continuously and systematically applied, and not suspended for indeterminate periods at frequent intervals. As it is, only after the spring and fall rains will anything like sufficient water be available from undeveloped surface streams, and then the quality of the water will be very bad, throwing tremendous loads upon the filtration and treating equipment of the small individual plants. A careful study of the natural surface water supply of this region should be made at once, before the chaotic conditions attendant upon a real scarcity of water develop.

Northeastern Oklahoma has an average rainfall of approximately 30 inches a year, but owing to the topography and soil characteristics of a large part of the area, most of the stream runoff takes place within a few days or weeks of the heaviest precipitation, which is chiefly confined to the spring and fall months. The result is that all the local streams contain very little water during the greater part of the year, and are out of their banks for the short periods immediately following the rainy seasons. A cursory examination of the stream valleys themselves would make this evident, without other knowledge of the fact. Most of the creeks and rivers of this region flow between high, steep mud banks through wide, almost level flood-plains. The average fall in the beds of the main streams like the Caney, and the Verdigris Rivers is about 1 foot or less per mile. Did these streams normally carry any considerable volume of water, the soft mud banks which mark their channels would be cut away, so these mud banks indicate the normal flow is very small. The presence of large, heavy flotsam caught in the trees high upon the banks also indicates severe high water is not at all uncommon. An examination of the local topography also explains this condition. The streams have their origin in low hills surrounding the main drainage basins, from which the fall is quite rapid until the level of the flood plain of the main streams is reached, after which there is almost no fall, so all the water which enters the beds of the small streams is deprived of motive power, and accumulates in the narrow ditch-like valleys, to overflow into the plain. As it generally happens that the main streams are high at the same time high water prevails in the smaller streams, these valleys, cut into the flood plains of the main streams, are already full of backwater from the main streams, adding to the menace of the local flood.

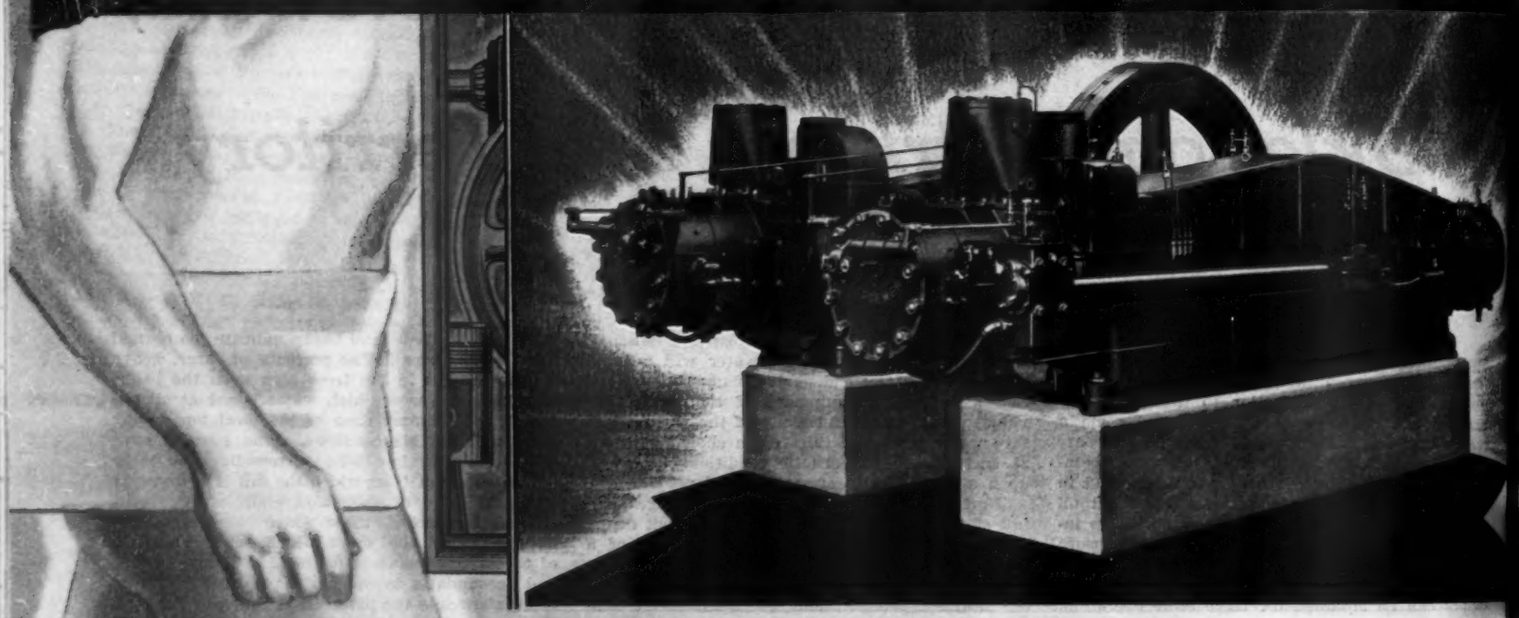
Location 1, View B—Flood plain of Big Creek directly opposite from View A, looking northeast. This plain is only 30 feet above the present low water level of the stream

Northeastern Oklahoma is a region of normal west dip of the country rock. As these rocks are alternate layers of hard sandstones, limes and soft shales, a definite topography has been developed, resulting from this condition. The harder formations mark the crests of high bluffs, all facing toward the east, whereas the westward facing slopes of the valleys are gentle and conform generally to the regional dip. This can be seen from a study of the accompanying profile. Thus, streams entering the main water courses from the west are relatively short, and drain smaller areas than those which enter from the east. Also, they cause more damage in time of high water, because of the rapid fall in the headwaters, and also because their channels have not been cut as deeply into the flood plains as those entering the main courses from the east.

For some time to come, individual operators will be able to draw enough water from these small streams to supply their limited needs, or they can do as one operator is doing at present, derive their flooding water from the shallow fresh water sands, found at about 40 to 50 feet deep. However, as all these sands outcrop a short distance east of any point where a well might be drilled, it is evident they will not continue to supply any great amount of water, especially during the summer. Salt water from deep horizons

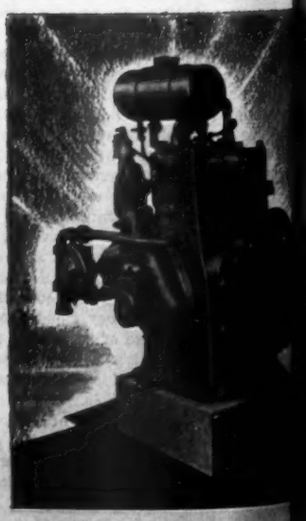
Here's PROGRESS

SEE THIS PAGEANT OF POWER



A NEW COMPRESSOR

COOPER-BESSEMER Type 12, rated 230 H. P. at 200 r. p. m. The greatest value in two-cycle history, because (1) every engineering detail has been thoroughly developed and tested; (2) accessibility has been vastly increased; (3) capacity to handle overloads is greater; (4) overall operating economy is better.



A NEW STARTER

COOPER-BESSEMER Type GX-3A, rated 6 H. P. It's a single-stage air compressor for starting gas and Diesel engines, capable of filling a tank of six cubic feet capacity up to 200 pounds pressure in five minutes, or up to 250 pounds pressure in nine and a half minutes.

NEW CONVENIENCE! NEW VALUES

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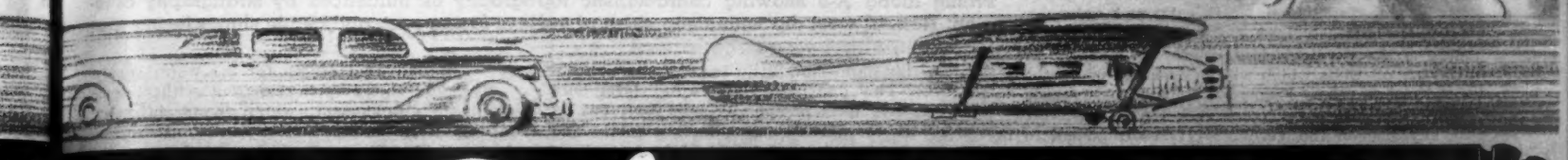

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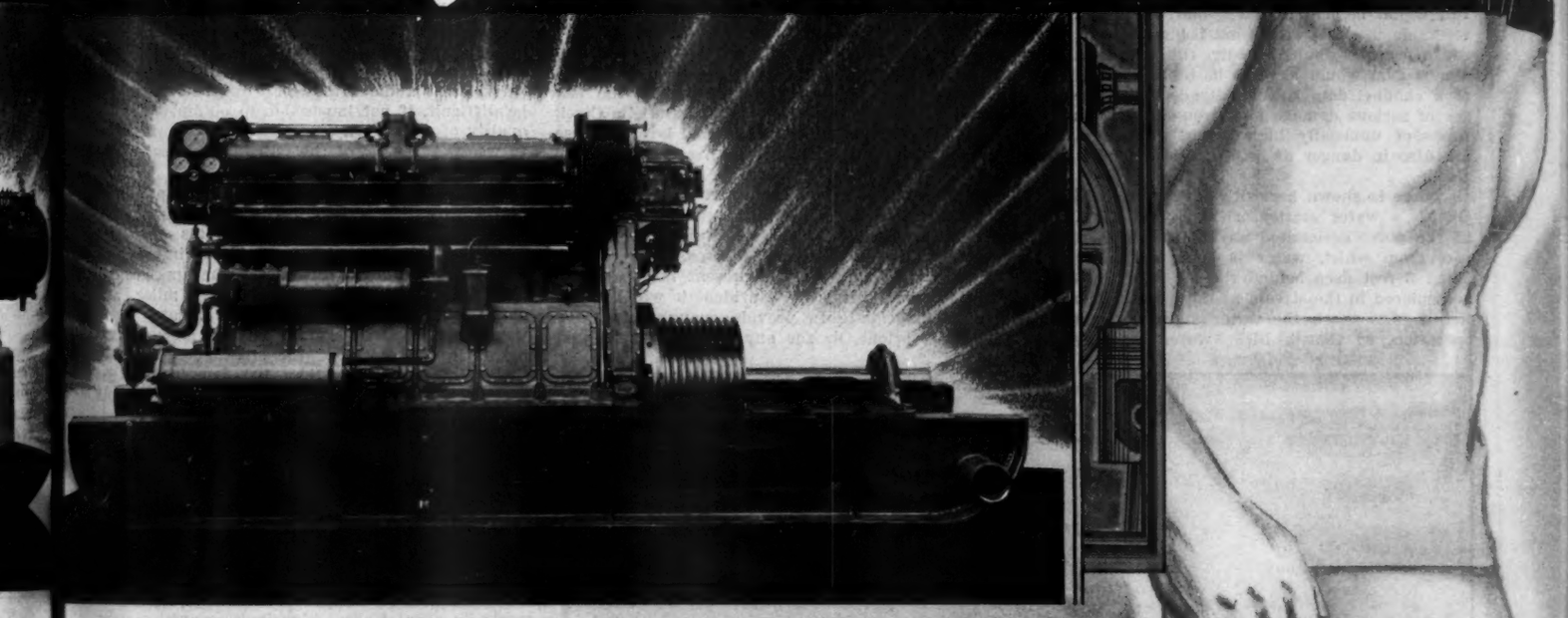

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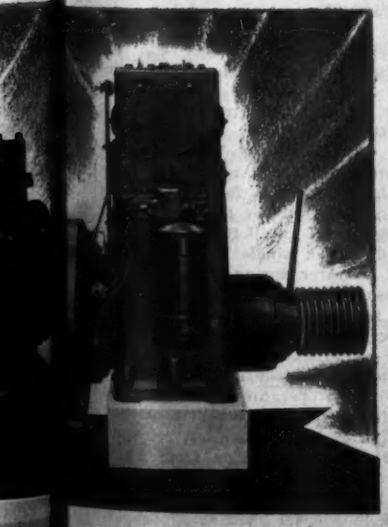

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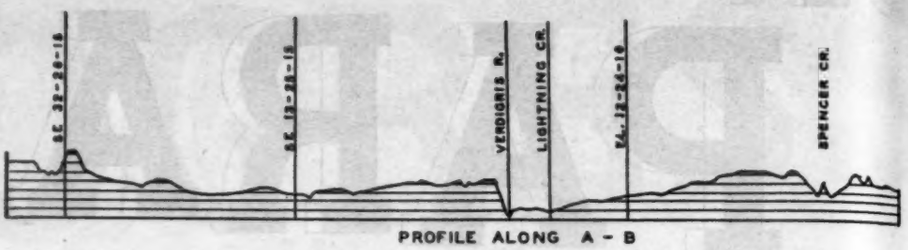
is available in unlimited quantities, but it is subject to several serious drawbacks. First, the sulfur content is so high it rapidly destroys equipment, and second, its precipitating mineral content is also very high, thus requiring additional costly treatment to prevent it from sealing off the input wells.

The development of a water supply by damming the main streams like the Verdigris River is altogether impracticable. A glance at the accompanying map will reveal the extreme width of the flood-plain of the Verdigris, and it is in this flood-plain most of the physical property improvements have been made. Here are towns, paved roads, rich farm lands, railroads, and extensive telephone and telegraph systems. Also, the flood-plain of the Verdigris contains several hundred of the very oil wells which will be operated under the flooding program. Property damage costs would be prohibitive to the construction of a reservoir of any size on the Verdigris. If resort is had to low-water dams in the channel, the problem is only half solved, for the storage capacity behind such dams is relatively small, so that an extensive flooding operation would be shut down for lack of water if it depended upon such a source; and moreover, the quality of the water when plentiful, would be bad and irregular. With any considerable use of water from behind such a dam, the reservoir would rapidly fill with silt, and a new dam would have to be built. The presence of a channel dam is also attended with the danger of serious damage to surrounding property in times of unusually high water, and such dams are also in danger of being washed out at every flood.

There is shown herewith a view of the Forest Oil Co.'s water station, situated on Big Creek, at the point designated as "1" on the map. The pool from which water is being drawn is only about 3 feet deep behind the log dam which has been placed in the stream at this point. When this picture was taken the water station was not in operation, so that a little water was passing through this dam—how little is shown in the picture 1-C. This dam raises the water level only 0.02 feet, and it is probable it will float out as soon as the stream has risen another foot. The water's edge in this pool is only 1.60 feet above the water's edge at the confluence of Big Creek with the Verdigris River, at the location designated as "2" on the map. Thus a 2-foot rise in the Verdigris will put back-water into this pool.

To the north of Big Creek at this location is the flood-plain of Big Creek and the Verdigris River. It stands only about 30 feet above the level of this pool, and 30 feet rises are not at all uncommon in the Verdigris.

Photograph at location 2 shows, by the low growth of trees along the Verdigris and Big Creek at their confluence, that the normal level of these streams is but little higher than at the time the picture was taken, so there is little hope of a normal supply of clean backwater from the Verdigris, and the only substantial quantity of water which the river will put into this pool will be very muddy flood water. Whereas this pool is probably adequate for the present needs of this single operator, it is quite evident it will be altogether inadequate to provide enough water for later operations, or for any other operator who may seek the same source for his water supply.



Profile along A-B showing characteristic topography as influenced by stratigraphy of region. Normal west dip with steep sides of valleys facing east, and gentle slopes facing west

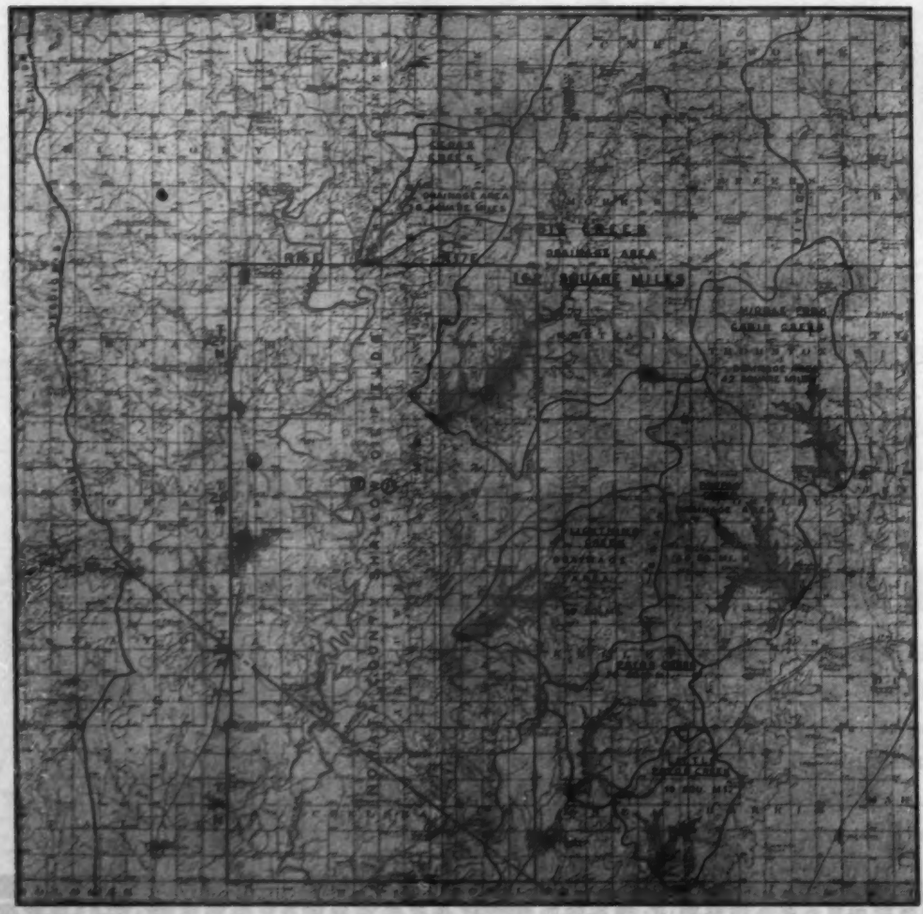
It should therefore be apparent without some systematic development, water fights, litigation, state intervention and even possible destruction of the field will result from a failure on the part of operators to develop an adequate supply of surface water. Even if all of these disasters fail to develop, the production costs will be greatly increased by individual attempts to cope with this problem. The construction and operation of a multiplicity of individual treating and filtration plants will be very costly, and their operation on polluted flood water, which will be all that will be available during most of the year, will always be at a disadvantage. Uniform results will be difficult, if not impossible to obtain, since the quality of water will change so widely from week to week. A review of the possible sources of surface water is greatly needed.

The accompanying map offers a reconnaissance of this situation. On it are marked a number of drainage areas which lie above sites at which could be constructed dams capable of impounding substantial quantities of water. The approximate area of each is indicated, in square miles, and also the approximate location of the lake which would result from a dam having a maximum height in the center of the stream-bed, of more than 50 feet and less than 100 feet. The height of these dams through the greater part of their lengths would be very much less than the maximum, owing to the character of the valleys, already discussed.

It will be observed there is one drainage area which is alone nearly equal in size to the combined areas of all the other basins outlined. This area lies behind a natural dam site on Big Creek, and contains 162 square miles, extending well up into Kansas.

The dam required to create the lake indicated would be about 80 feet high in its central section for a distance of about 300 feet and would be about half a mile long on its crest. The lake indicated would be somewhat larger than Spavinaw Lake from which the city of Tulsa derives its excellent and plentiful water supply, and the drainage area behind a dam built at the point suggested is some 20 square miles larger than that behind the Spavinaw dam. With an average rainfall of 30 inches, and an average stream run-off of 6 inches, over the drainage area, there would be available at this dam site in excess of 100,000-acre feet of water annually. The lake indicated covers about 2,500 acres, and would have an average depth of 20 to 25 feet, so there is clearly more than enough water available to fill the lake in a single year. As all the rainfall does not take place during a single period, a very heavy utilization of water during one dry season would be replenished during the following rainy reason. Without some knowledge of the rate of demand for water, it is impossible to construct even a tentative mass-diagram of the lake storage, but it is evident this lake alone would care for the needs of all the operators in a very large part of this field.

As an indication of this sufficiency, reference is again made to Spavinaw Lake, from which Tulsa takes in excess of 20,000,000 gallons a day for weeks at a time in the summer time. This quantity is equal to 476,000 bbls. of 42 gallons, and is thus substantially in excess of the estimate of 300,000 bbls. per day heretofore estimated as probable maximum flooding requirements. In flooding operations the demand would not be so highly seasonal as it is in municipal water supply



Map of northeastern Oklahoma showing a number of drainage areas which lie above sites at which could be constructed dams capable of impounding flood waters

work, but would continue throughout the winter at very nearly the same rate as during the summer. This would permit the capture of a great deal of the run-off water which, in a municipal system, runs over the dam during the spring rains, because at the end of the winter dry spell, the lake would not be full, as is generally the case with municipal supply lakes.

The other possible lake sites shown on the map all suffer from some fundamental disadvantage. At most of them the cost of a dam would be prohibitive in comparison with the amount of water which could be impounded. In most, the drainage area behind the dam is insufficient to furnish any substantial quantity of water, so that the development of these sites would be only a local benefit. In others, the capacity of the reservoir is ill adjusted to the size of drainage area, so that a large part of the run-off would be lost. Others are remote from the seat of operations, and the cost of transmission would be excessive. The development of the Big Creek water shed seems to furnish the only solution to the water supply problem in the Nowata County fields.

This water shed consists chiefly of high, barren prairie. There are very few improvements, even improved roads, in the land which would be covered by the lake. Judging from the appearance of the few farms situated in the bottom lands along Big Creek, what land has been put into cultivation has given very poor returns. Very few wells have been drilled in land that would be flooded, and most of these have been failures. Most of the others have been plugged and abandoned. This situation does not prevail at some of the other lake sites indicated, which would offer a very potent objection to their development for water supply purposes. The suggested dam site on Big Creek lies close to the richest part of the producing area, and a single large capacity main could be made to serve most of the field. Both transmission and distribution costs would be at a minimum. The size of the lake would guarantee a uniform quality of water, and would make possible the construction of the most efficient type of large scale filtration plant, so the water delivered to the operators would be of potable purity, and of uniform chemical content. Should further chemical treatment of the water be necessary, it could be done at a minimum trouble and expense, and with a maximum of uniformity in results.

Aside from the oil production aspects of such a development as suggested, there would be the distinct public benefit of a large body of water available for recreational purposes in a region almost totally devoid of such attractions. Since it would not—for the present, at least—be used for municipal water supply, the shores could be developed as resorts, camp sites, residence sites, boating, bathing and fishing privileges exploited, and the city of Nowata, lying only 10 miles from the dam, made into the leading resort town of the state. A large number of populous towns are within easy access of this lake, Tulsa, Bartlesville, Caney, Coffeyville, Independence, Columbus, Parsons, and even Winfield, Arkansas City and Wichita, Kans., would directly benefit. The construction of this reservoir would aid in flood control on the lower Verdigris, and would eliminate all destructive floods from the lower reaches of Big Creek valley, leaving it subject only to backwater flooding from the Verdigris, which is a nuisance, it is true, but which does little real damage.

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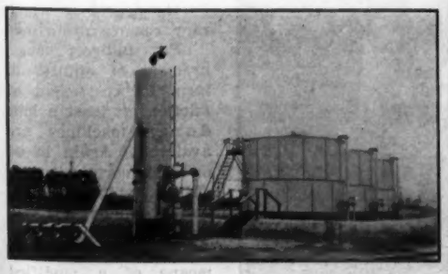

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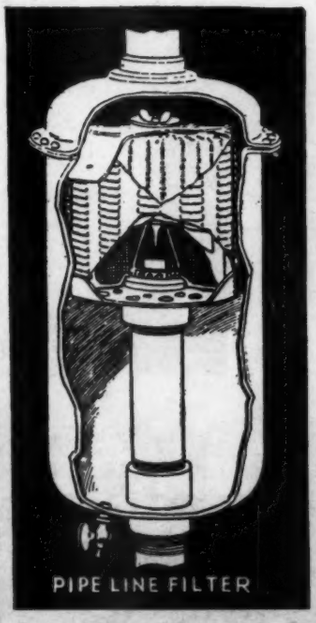

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Oiliness Index as a Criterion of Lubricating Oil Quality

By F. W. BRETH and L. LIBERTHSON
L. Sonneborn Sons, Inc.

N.P.A. **—Oiliness is a term which is difficult to apply to lubricants but the authors suggest the use of an oiliness index for judging quality. This paper was presented before the N. P. A. meeting in Cleveland, Ohio**

The progress of lubricating oil technology has for the past few years been marked by advances of profound and far reaching significance. Certain functional and qualitative criteria have been stressed to the point of almost exclusive importance and the attitude of the industry toward the more orthodox standards of quality has undergone, and is still subject to, drastic changes. These changes may be attributed largely to economical and competitive factors and to the perfection of new methods of refining rather than to any newly acquired physical-chemical insight to the fundamental nature of petroleum lubricating oils.

Solvent refining has, for example, placed the concept of viscosity index into a position of prominence which for a time took first place over other properties, such as resistance to sludging, oxidation tendency, oiliness. More recently the idea of film strength has been exploited to a degree far from justifiable considering the relative importance of this property. Viewing the general situation, it is plain that critical inquiry into the nature and significance of these factors has begun to occupy the attention of many refiners today.

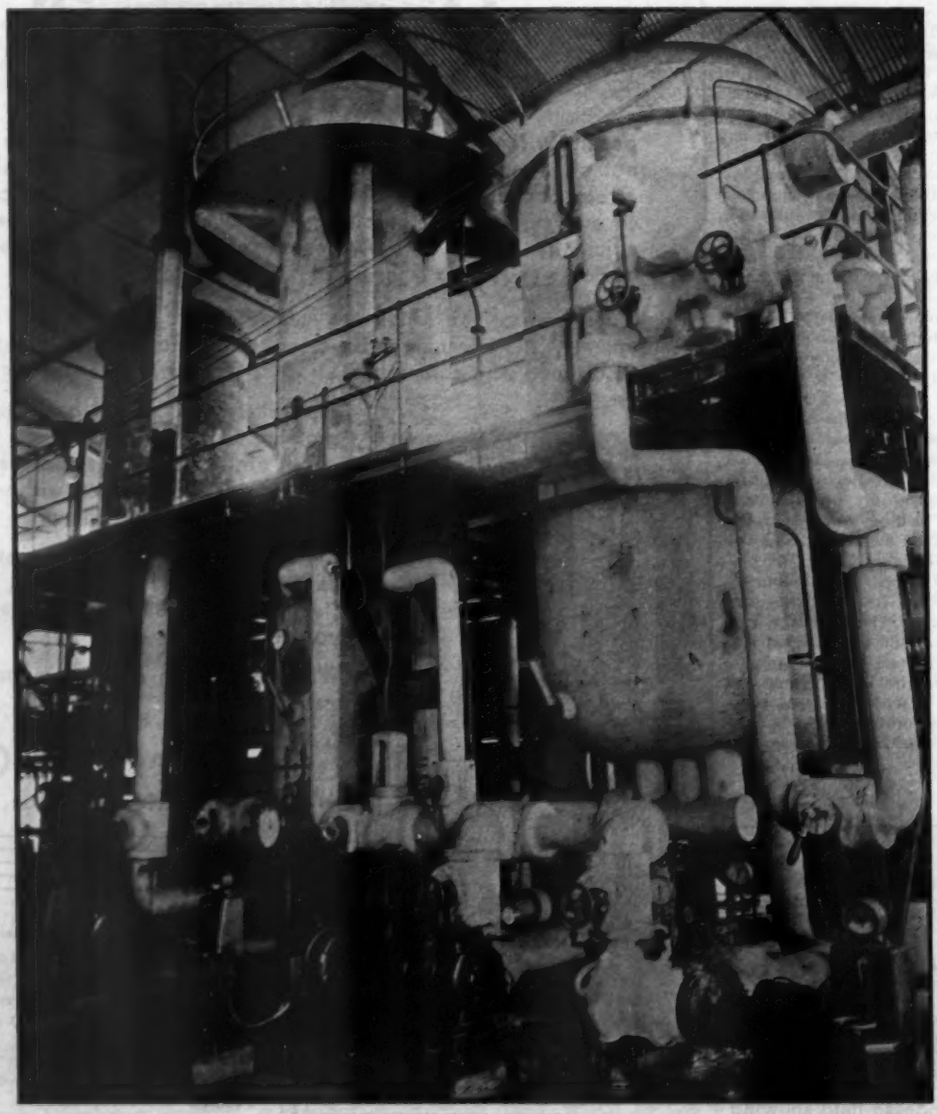
There is tremendous need in the industry today for a general agreement as to what should be held as the most important quality of an oil. It is admitted that the chief function of an oil is to lubricate. Then what constitutes lubricating value? The necessity of a satisfactory method of evaluating this function has always been felt but none could agree on a rational method of approach. Yet if it is recognized that a lubricating oil must first of all lubricate and that therefore a lubricating oil must possess oiliness above all other properties, then the most important step towards evaluation of quality will have been taken.

As an indication of inherent quality, the concept of oiliness is not new. It has been defined as (1) that characteristic of a liquid which is responsible for the degree of friction between two surfaces that cannot be accounted for on the basis of viscosity alone. Again, it has been defined as (2) the ability of a lubricating oil to orient itself on bearing surfaces so as to form new surfaces with a low coefficient of static friction. An even broader definition is the one (3) in which oiliness is regarded as that characteristic which an oil must possess to a sufficient degree to enable it to overcome every frictional stress to which it is subjected.

Such definitions as the above are considerably short of being precise. For, since we are dealing with petroleum lubricating oils something more tangible in the way of a definition is needed and such a definition can be derived only from a physico-chemical analysis of the materials and forces involved[10]. In the light of the theories of Parish & Cammen, oiliness is synonymous with adhesion. That this identification is far more illuminating than the indirect interpretation of oiliness in terms of friction[7,8,9] will be amply illustrated in this paper.

Furthermore, based on their study of the oiliness of Pennsylvania oils, Breth and Kessler[11] have shown that oiliness is attributable to a definite constituent originally present in Pennsylvania oil. They have found that acetone extraction of a Pennsylvania oil yields a product which is enormously efficient in preventing metal-to-metal contact. This substance they have designated by the term "proto oil." They have further demonstrated from the difference in behavior of a normal and excessively dewaxed Pennsylvania oil that the method and degree of refining plays a critical role in the conservation of these proto oils. Due to the fact that at low temperatures they are precipitated to a considerable degree, the adverse effect of excessive dewaxing on the oiliness of a Pennsylvania oil is readily seen. Similarly, excess filtration through fuller's earth and excessive acid treatment have both been shown to reduce oiliness precisely by the degree to which they remove proto oils.

For indirect measurement of oiliness in terms of coefficient of friction[4] at least a half dozen machines are available. Again based on the correlation of oiliness with wetting power and surface tension, efforts have been made to measure it by means of a modified Donnan Pipette standardized against a liquid



Solvent recovery system of Edeleanu treating unit of a Palembang, Sumatra, refinery

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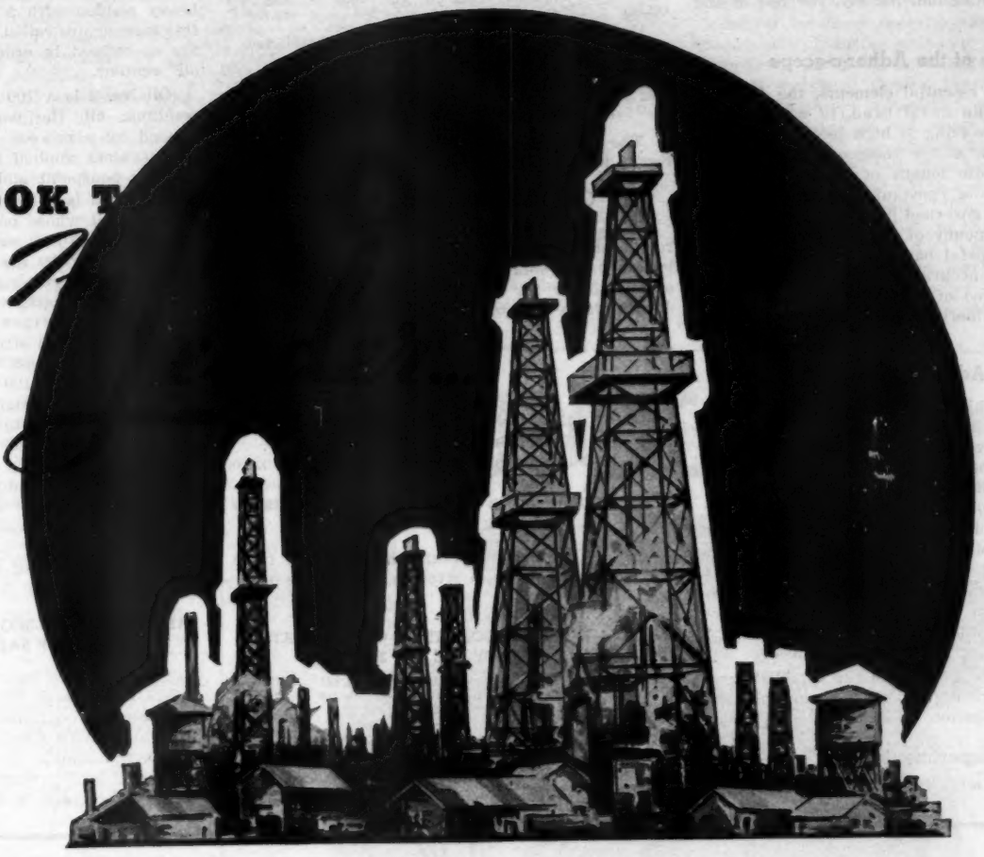

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of known surface tension[3]. Others have resorted to the use of the Dallwitz-Wegener method[4]. Yet, in the general method of approach, none of the above can be held comparable in simplicity and in rationale to the method based on the identification of oiliness with adhesion, namely, the use of the Sperry Adher-o-scope.

Principle of the Adher-o-scope

Reduced to its essential elements, the Adher-o-scope utilizes a thin metal band, to which an oil film is applied, revolving at high speed which may be controlled from a few thousand up to 15,000 r.p.m. for a definite length of time in a conditioned atmosphere of constant humidity and constant temperature governed by the viscosity of the oil. The actual amount of oil remaining on, i.e., adhering to, the metal band at the end of a run is found to be an accurate and reproducible indication of the degree of oiliness; that is, literally the capacity for adhering to metal surfaces of the oil under test.

What the Adher-o-scope Reveals

The results which are obtainable with the Adher-o-scope fall, as will be seen below, completely and with an inexorable logic in line with known facts. Moreover, the results are invariably reproducible. The instrument, therefore, enables the investigator (a) to obtain a comprehensive idea of the comparative oiliness of oils from different sources; (b) to distinguish between the effects on oiliness of various agents with which the oil is compounded to obtain other characteristics; (c) to identify an oil from the manner in which it performs in the test; and (d) to approximate very nearly the process by which it was refined.

Finally, it paves the way to the establishment of what may be logically conceived as an "oiliness index" for the evaluation of oiliness.

Experimental

A set of seven oils of an SAE No. 20 rating were tested at 15,000 r.p.m. yielding the following results:

TABLE 1—ADHER-O-SCOPE TESTS ON LUBRICATING OILS OF SAE NO. 20 RATING

Oil No.	Adhesion in Mg. oil remaining on band	Test temp. (°F.)	Sayb. vis at 210°F.
1	2.35	210	57
2	2.80	210	57
3	2.65	210	57
4	2.30	210	57
5	1.80	210	57
6	2.05	195	52
7	0.60	130	46

The values given for each oil in Column 2 represent the average of several determinations.

Calculation of Oiliness Index

It is obvious that if we take the value for a representative Pennsylvania oil as 100 and the lowest value obtained in the group as zero, an oiliness index for any of the other oils may be derived from the above figures by the formula:

$$\frac{x-b}{a-b}$$

where x = adhesion in milligrams of the oil whose index is desired
b = adhesion in milligrams of the oil of zero oiliness
a = adhesion in milligrams of the oil taken as having an index of 100

In this manner we obtain the following table in which the indices are given in consecutive order in Column 3:

TABLE 2—ADHER-O-SCOPE TESTS ON LUBRICATING OILS OF SAE NO. 20

Oil No.	Adhesion in Mg. oil remaining on band	Oiliness index
2	2.80	126
3	2.65	117
1	2.35	100
4	2.30	98
6	2.05	83
5	1.80	69
7	0.60	0

Now note how the values agree with the facts.

No. 1: The oiliness index of this oil is taken as 100. This is a 100 per cent Pennsylvania oil of normal pourpoint obtained by straight distillation in contrast to the conventional blending of a heavy residue with a neutral oil. Oils refined in this manner are called long residuum oils and they are so refined in order to retain original "proto oil" content.

Oil No. 2 is a 100 per cent Pennsylvania long residuum oil, the pourpoint of which was depressed by a process developed by L. Sonneborn Sons (patent applied for) for simultaneously depressing pourpoint and increasing oiliness.

Oil No. 3 is a 100 per cent Pennsylvania long residuum oil whose pourpoint has been depressed by the addition of a suitable quantity of Paraflow.

Oil No. 4 is the same as No. 2 but compounded with a small percentage of tricresyl phosphate to impart film strength. Note how the addition of this substance reduces the oiliness index and therefore indicates that film strength is not identical with, or related to, oiliness.

Oil No. 5 is a 100 per cent Pennsylvania oil made by blending bright stock and a neutral and excessively dewaxed to a low pourpoint.

Oil No. 6 is a 100 per cent Pennsylvania oil produced by blending bright stock with a 200 neutral and compounded with a small percentage of tricresyl phosphate (for film strength).

Oil No. 7 is a well-known brand of a naphthenic base pale oil.

A second group of oils of SAE No. 40 rating were tested with the following results:

TABLE 3—ADHER-O-SCOPE TESTS ON LUBRICATING OILS OF SAE NO. 40 RATING

Oil No.	Adhesion in Mg. oil remaining on band	Oiliness index
8	4.33	158
9	4.15	144
10	2.55	100
11	3.45	92
12	3.40	90
13	3.20	74
14	2.90	52
15	2.20	0

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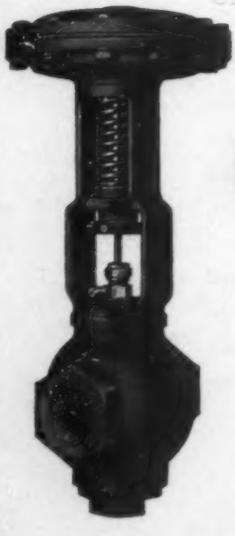

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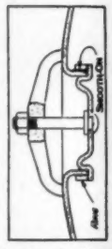

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Again note how the indices tally with the facts regarding these oils.

Oil No. 8 is a 100 per cent Pennsylvania long residuum oil treated by the process (patent applied for) referred to above as developed by L. Sonneborn Sons for the purpose of simultaneously depressing pourpoint and increasing oiliness.

Oil No. 9 is a 100 per cent Pennsylvania long residuum oil with its pourpoint depressed by the use of a suitable quantity of Paraflow.

Oil No. 10 is a 100 per cent Pennsylvania long residuum oil of normal pourpoint.

Oil No. 11 is a 100 per cent Pennsylvania oil produced by blending, for higher viscosity, a predominant quantity of high viscosity neutral with bright stock and excessively dewaxed for reduced pourpoint.

Oil No. 12 is the same as oil No. 8 but compounded with small percentage of tricresyl phosphate for film strength. Note again how the addition of tricresyl phosphate reduces oiliness.

Oil No. 13 is a typical Pennsylvania oil made by blending bright stock with 200 neutral and then selectively extracted with chlorex to raise the viscosity index.

Oil No. 14 is a California oil dewaxed by propane and refined with selective solvents.

Oil No. 15 is a well-known brand of a naphthenic base oil.

How Oiliness Index Reflects the Facts

It is obvious that the concept of oiliness index is amazingly accurate in reflecting known facts and in revealing the influence of certain refining and compounding practices on oiliness.

1. Naphthenic oils are known for lack of oiliness. This fact is shown in the case of oils No. 7 and No. 15.

2. The findings of Breth and Kessler as to the effect of excessive dewaxing in depriving a Pennsylvania oil of proto substances are clearly shown in the case of oils No. 5 and No. 11.

3. The adverse effect of oiliness upon tricresyl phosphate, a representative "film strength" agent, is shown in the case of oils No. 4, No. 6 and No. 12.

4. The consistently high oiliness obtained in refining Pennsylvania oils by the long residuum process is shown in the case of oils No. 1 and 10.

5. The fact that oiliness is further enhanced by the use of a pourpoint depressant of the type of Paraflow is shown in the case of oils No. 3 and No. 9.

6. The outstandingly desirable influence upon oiliness of the pourpoint depressing process developed by L. Sonneborn Sons laboratories is indicated in the case of oils No. 2 and No. 8.

Influence of Solvent Refining on Oiliness

The most significant indication of the value of oiliness index is afforded by the results obtained in the case of oils No. 13 and No. 14. These are solvent refined oils and exhibit a degree of oiliness which is remarkably low considering the source of the oils. This could have been readily foreseen. Solvent refining, in fact, is today being seriously examined from the standpoint of the effect of the processes involved on the oiliness of various raffinates. It was inevitable that it should be questioned whether something or not were thrown away in the extracts which it was not altogether as desirable to eliminate as the objectionable low V.I. elements of the oil in process.

There is certainly no doubt that solvent extraction while producing oils of a high V.I. do not increase oiliness. The conclusion therefore is that an oil obtained by whatever solvent refined method must subsequently be compounded[4] with other agents in order to restore oiliness.

Conclusion

As a means of evaluating lubricating oil quality, we propose that "oiliness index" possesses valid and demonstrable merit and supplies a definite need to the petroleum industry.

The Sperry-Cammen Adher-o-scope, because of simplicity of operation and reproducibility of results, is an ideal instrument for evaluating the lubricating quality of an oil in terms of an oiliness index.

Finally, the Adher-o-scope can be used as a reliable guide to the selection of such refining methods and compounding practices which do not sacrifice oiliness for the sake of secondary characteristics such as film strength, viscosity index, etc.

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Commission Acts to Stop Pollution

The Kansas Corporation Commission has obtained the first order under a new law to compel an oil operator to stop the pollution of the ground water supplies of two cities and a large rural and enter the clear water horizons and pollute population. The 1935 legislature passed the law authorizing the oil control division of the corporation commission to take charge of the water supplies near oil-producing regions.

An oil company operating in Barton County has a small producing well but is in the hands of a receiver. Judge R. L. Nesmith of the district court of Sedgwick County heard the application of the corporation commission to compel the receiver to shut off the salt water rising in the well and pouring into the ground water strata. The well is about 3,000 feet deep and passes through several strata of fine water and then hits an artesian flow of salt water. The corporation commission charged that the company failed to plug off the salt water and had even removed large size water casing strings leaving only the oil string. This let the salt water come up the hole and enter the clear water horizons.

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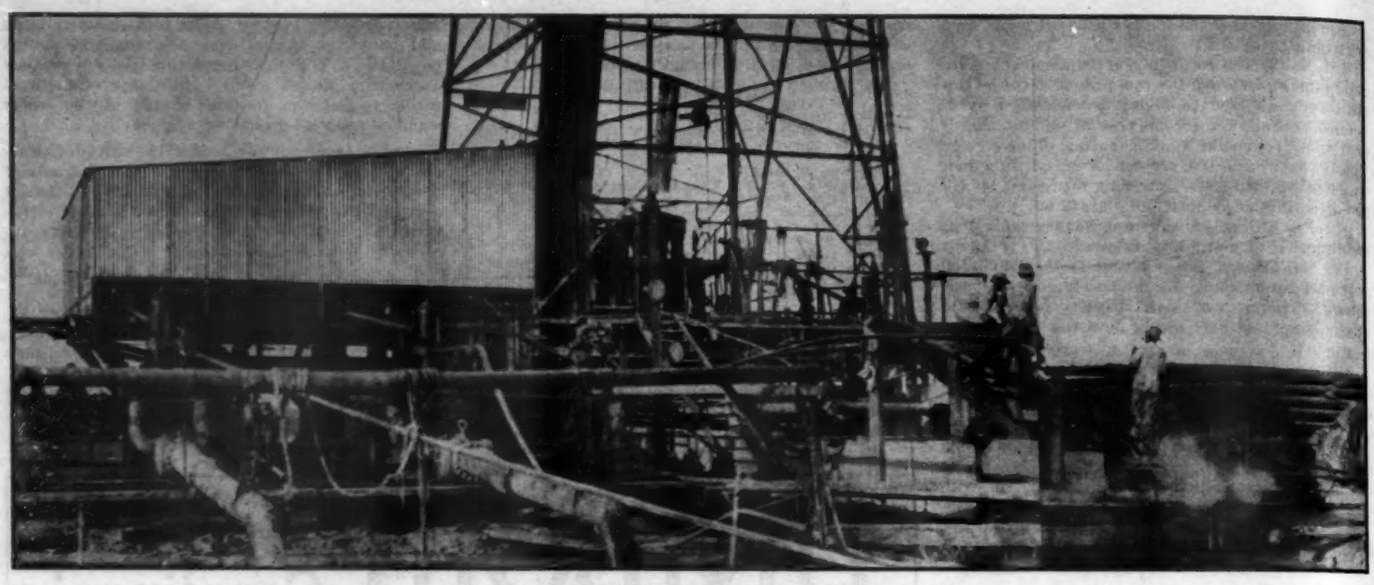


Set-up of Gulf Production Corp. No. 45 Moore, Orchard field, Fort Bend County, Texas Gulf Coast, from mud discharge side

Hazardous Fishing Job Is Tackled by Gulf Engineers in the Orchard Field

By NEIL WILLIAMS

Gulf Oil Corp. has under way in its Orchard field, in Fort Bend County, Texas Coast, a job of cutting out and recovering a string of stuck drill pipe from a well in which a succession of gas charged sands has presented a difficult and unusual problem. The well, No. 45 Moore, is one in which the hole bridged to within 600 feet of the top after water was pumped in to kill a blowout experienced while drilling at a depth of 6,705 feet. In the blowout the well functioned perfectly and was held under control readily, but the high pressure gas charged various shallower sands. An old shallow test, located some 1,500 feet distant, evidently in contact with one of these sands, blew out, and at the same time the gas started breaking out at several other places in the vicinity, forming one large crater and several smaller ones. It was to flood this gas to prevent additional cratering and further charging of sands that water was pumped into the well. Surface casing, consisting of 1,315 feet of 10¾-inch pipe, fully cemented, held, and surface formations around the well were protected, but there was nothing to prevent the gas from finding its way into any sands or other loose and porous formations in the open hole from there to bottom. Until the gas in these sands is dissipated, or sealed off, operations of any kind will be treacherous.

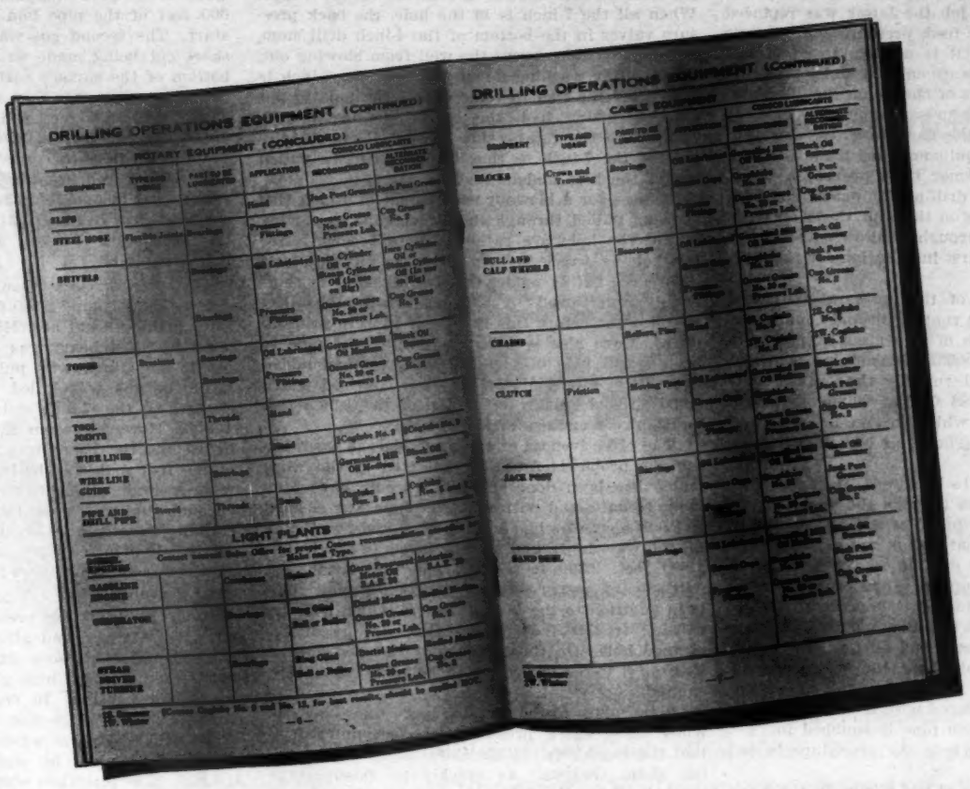
The job of cutting out and recovering the 4-inch drill stem stuck in the Moore well is one which involves going in the hole and washing down over this pipe with 7-inch pipe, and running an outside cutting tool. Considering the treacherous gas-charged sands with the hazard of blowouts, such an undertaking would be impossible by conventional procedure. The job, however, was turned over to M. L. Cashion, drilling superintendent and engineer, who has remained at the well almost constantly, and by special practices and facilities which have been devised for combatting and controlling the gas, steady, although troublesome, progress is being made.

Connecting up to go in hole through heavy pressure, rotary drilling equipment on Gulf Production Corp. No. 45 Moore, Orchard, Texas Gulf Coast

In view of the precautions which have been taken, it is believed there are only two factors which might prevent the eventual successful culmination of the job. These are the possibilities of the gas again breaking through the shallow sands and blowing out the craters formed some distance away, and the sticking of the 7-inch over the 4-inch. Both possibilities are considered remote. In the first place, when the hole bridged it is probable the walls were shaled up sufficiently to prevent the gas breaking through again at the surface of the ground. As for sticking the 7-inch, the greatest hazard is in the hole bridging again with this pipe in the hole. It is likely this pipe can be pulled off the fish in plenty of time in an emergency.

The first step in the undertaking was to back off as much of the 4-inch as possible, and in this approximately 600 feet, to the top of the bridge, was recovered. Then came the problem of providing ways and means for control of the gas pressures during all stages of the fishing operations.

On the well at the time of the blowout were two blowout preventers. First, on top the master gate on the surface casing was a pressure operated, ram-type preventer, on which,



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in turn, was a Hosmer type, hand operated preventer. With this hookup a conventional rotary was used. For the fishing job the latter was replaced with a large hydraulic feed, pressure drilling type of rotary, with which it is possible to go in and come out of the hole, rotate on drill under pressure, which is done by means of chokes on the discharge lines applying a back pressure on the hole, if necessary, to control the gas pressures. Installation of the pressure equipment has made inoperative the upper, or Hosmer type, preventer.

This type of rotary drilling equipment has been used in a few instances on the Gulf Coast on wells attempting to drill through shallow gas-charged sands, but this is the first installation for this particular purpose.

In the installation of the pressure equipment provision was made for running in and coming out with a string made up of two sizes of pipe, the 7-inch and the 4-inch. The 7-inch pipe provided for washing down and running the outside cutting tool, consists of 588 feet of 26-pound, Grade D, flush joint casing, which is run in on 4-inch flush joint drill pipe. The procedure in going in the hole follows:

First, the master gate is closed. Then the first stand of 7-inch is run in through the blowout preventer to the master gate. When the preventer is closed, the 7-inch automatic slips and snubbing bar are put on the pressure drilling rotary on top. As previously stated, the upper (Hosmer type) preventer is inoperative during this procedure with the pressure hookup. Then the master gate and lower preventer are opened and all the 7-inch pipe is snubbed in. With this done, the 4-inch pipe is put up with two back pressure valves, and with 7-inch snubbing bar replaced with a 4-inch bar and drilling packer, the 4-inch pipe is snubbed in.

To come out of the hole the procedure is reversed.

However, all this would not eliminate the hazard of the well blowing out through the 7-inch pipe while it is being snubbed in or out of the hole, or when a cut of the 4-inch pipe is being pulled through the 7-inch in coming out of the hole, without special tools and precautions having been devised for closing the inside of the pipe during those stages of operation. In previous cutting jobs, which have been under more or less normal conditions, no provision has been made to guard against such blowouts, and during the time required for those operations a well has been left unprotected. Should a blowout occur under such circumstances there would be no way of controlling it. Considering the treacherous gas charged sands and the pressures in the Orchard well, the fishing job could not be accomplished with the hole open and unprotected even for just a moment.

The tool devised for closing the inside of the 7-inch pipe while being snubbed in or out is inserted free in the bottom of the first joint of 7-inch above the rotary shoe. It is constructed in such a way that it rides the top of the fish up the inside of the 7-inch as the hole is being washed down. Pump pressure holds the tool down. Gas pressure from below, when it overbalances the pump pressure in trying to blow out, will cause the tool to seal against the inside of the 7-inch. When all the 7-inch is in the hole, the back pressure valves in the bottom of the 4-inch drill stem, however, would prevent the well from blowing out. When, after washing down the hole, the 7-inch is pulled off the fish to come out of the hole to put on the cutting tool, the special sealing tool is pumped to the rotary shoe again, closing the inside of the 7-inch so that the pipe can be pulled out of the hole under pressure.

Chances for a blowout while a cut of 4-inch fish is being pulled through the 7-inch pipe in coming out of the hole are rather remote because after the hole is washed down to make the cut, and before the cut is made, the drilling mud is thoroughly conditioned. A blowout in all probability would occur before this is done if it were going to do so. Care also is taken in pulling the pipe to keep a full hole of mud. However, as an added precaution, a special tool has been devised which can be fitted quickly in on top of the 4-inch fish and seal off against the 7-inch.

The effectiveness of these methods in overcoming the problems faced is indicated in the work which has been done so far. Six cuts have been made to date, and with these the hole was cleaned to 2,908 feet. Gas has been encountered practically all the way down, and at four levels in particular, 1,800 feet, 2,300 feet, 2,500 feet and 3,299 feet, extra heavy gas pressures have been fought. This is in addition to the high pressures which now are causing trouble from the present bottom of the cleaned hole. On those occasions the gas blew as long as 8 to 10 hours before being killed or dissipated.

Relief plugs in the two discharge lines blow out when these extra pressures are encountered so that the gas blows out the side instead of through the shale shakers. As quickly as possible the gates in these lines are closed and with the returns by-passed through smaller lines and chokes to the shakers and pits, back pressure is applied to the well.

In addition to the trouble caused by gas pockets and high pressures, drilling mud has been lost in the formations almost continuously. At 1,800 feet, 2,500 feet, 2,800 feet and 3,100 feet, in particular, considerable quantities were lost, and more recently, while the hole was being washed down from 2,908 feet to 3,300 feet, all the mud was lost. At 2,800 feet and also at 3,100 feet no gas was indicated, but in the last instance, at 3,300 feet, 1,000 pounds pressure was gauged on the flow lines. Loss of mud has occasioned considerable delay in the fishing work due to the time required for mixing mud.

One of the most serious problems in connection with the job has been to provide an adequate supply of mud. Large quantities of mud have had to be purchased. During one period of 12 days, 1,000 sacks of mud material were required daily. Mud is mixed every night, and an extensive mud reserve pit system has been provided. So great have been the mud requirements that the company is contemplating installation of a mud making plant with a mill for grinding of clays.

The first cut of 4½-inch pipe was made at 1,040 feet. This was made after approximately 600 feet of the pipe had been backed off at the start. The second cut was made at 1,276 feet, a short cut being made so as not to go below the bottom of the surface casing at 1,315 feet on that cut. Successive cuts then were made at 1,773 feet, 2,245 feet, 2,545 feet and the last at 2,908 feet. The short cut from 2,245-2,545 feet was made as the top of that fish was such that trouble had been experienced in getting down over it with the 7-inch, and to avoid further difficulty it was considered safest to cut it out where the hole already had been washed down, without trying to get a long cut.

The trouble came about as a result of hitting a gas pocket around 2,300 feet while washing down after making a cut at 2,245 feet. As had been the practice when heavy gas pressures were encountered, the 7-inch was pulled up above the fish until the gas was killed so as to minimize the chance of the 7-inch getting stuck around the 4-inch. However, when the gas pressure was relieved and the 7-inch was run back down, the top of the fish could not be located, and several days were spent in trying to find it. Since then, when encountering pressures, the practice has been not to pull up entirely above the fish but rather just to the top joint. This is sufficiently high that if an emergency arose the 7-inch could be pulled off the fish quickly.

Since the heavy gas pressures were encountered around 3,300 feet and all the mud was lost, the most trouble has been experienced. Threatened with sticking, the 7-inch pipe was pulled up into the surface casing. In trying later to run back down, a small bridge was hit just below the surface casing. This was washed out, but at 2,064 feet another bridge was hit which could not be gotten through. The pipe then was pulled out of the hole, and has been run back in with a shale bit to drill out the bridge and to get back to the top of the fish at 2,908 feet.

Pressure drilling is being resorted to because it was believed that otherwise it would be some time before it would be possible to go back in the hole to clean out the bridge. Such belief is based on estimates of the amount of gas which would have to be dissipated. In making these estimates it has been theorized that the 3,300-foot sand, which has been giving the present trouble, is the one through which the high pressure gas migrated up dip to the crater well. Large volumes of mud and sand, estimated around 500,000 cubic feet, came out of the crater well during the blowout, and if this were replaced with high pressure gas, becoming sealed off at the bottom, there would be 500,000 cubic feet of gas in the sand under formation pressure.

Considering the pressure at that depth, this gas would amount to about 50,000,000 feet at the surface. At the rate the gas was being dissipated, it would have been a long time before the pressure could have been relieved sufficiently. Hence it was deemed advisable to attempt to resume operations under pressure and permit this gas to dissipate as the work proceeded. In the event the 7-inch pipe should become stuck it would be possible to wash over it with 9-inch flush joint pipe.

Plans of the company anticipate that the open hole can be cleaned to within 500 or 600 feet of bottom before pressures in the deep sand at the bottom begin giving too much trouble to continue work. However, the work will be continued in the hole as it stands as deep as possible, and then casing will be run and cemented and the remainder of the stuck drill pipe will be cut out and pulled, along with the bit, through the cased hole. The casing will consist of 9-inch flush joint pipe, which will be run in under pressure. This size pipe can be handled easily through the surface casing, and in the procedure it will be hung in a hanger type head below the master gate, so that the same master gate and blowout preventer hookup can be used in completing the fishing job. Then, when all the pipe and the bit have been recovered, and the hole cleaned to bottom, 7-inch casing will be run and cemented, after which the well can be completed in the usual way. In all this procedure, there will not be a time when the well is not under complete control.

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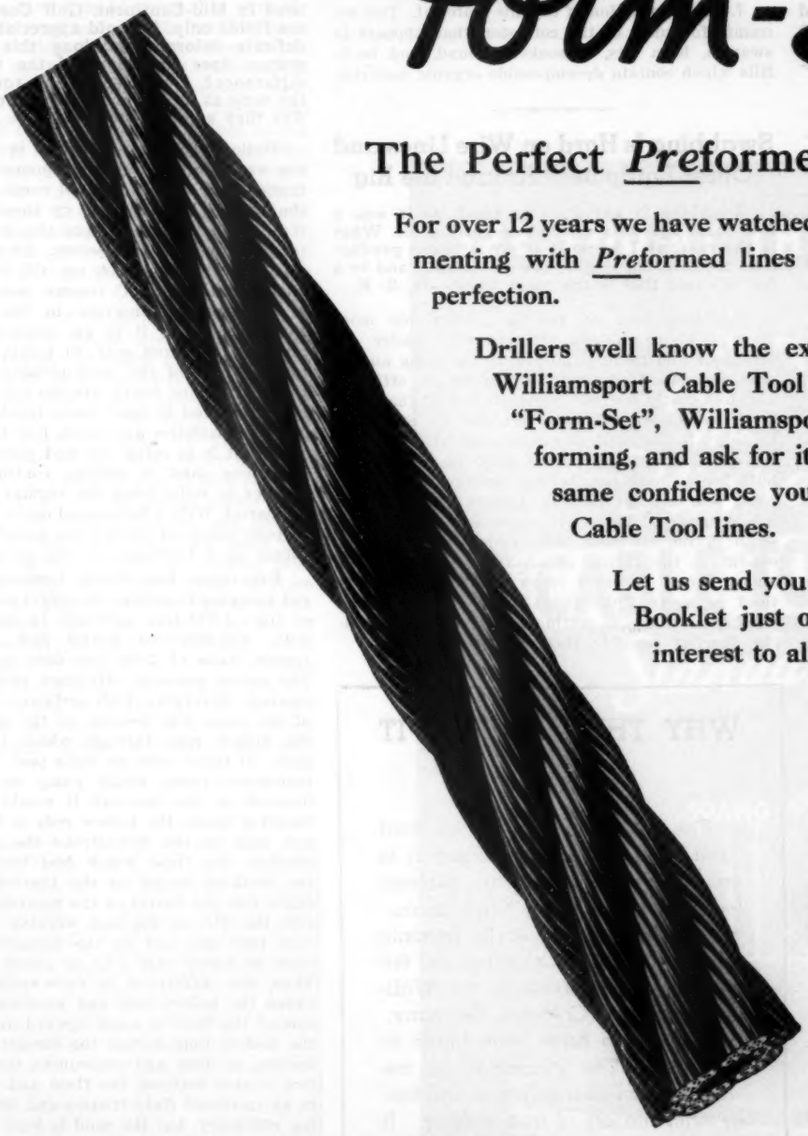

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PROBLEMS FROM READERS

Edited by T. F. Smiley

Many Undersurface Conditions Have Part in Corrosion of Pipe Lines

I would like to inform myself more thoroughly regarding the causes of corrosion of pipe lines and the methods of dealing with it. In this connection I wish you would explain for me the electrochemical theory as it is used in discussions of pipe line corrosion, and also I wish you would name the causes of pipe line corrosion as they have been recognized by engineers and practical pipe line men.—F. M. O.

The causes of pipe line corrosion are many, involving a wide range of undersurface conditions. For the subjoined answer to your questions, including a definition of the electrochemical theory and a list of the principal causes of pipe line corrosion, this department is indebted to G. C. Gabler and O. C. Mudd, of the Shell Pipe Line Corp.

All matter inherently tends to assume the most stable condition in its environment. As iron is the basic metal of most pipe lines, they naturally tend to revert to hydroxides, oxides or other of the less familiar iron compounds. This tendency is seen wherever the pipe line is exposed to the action of soil chemicals, water and electrical forces.

The electrochemical theory of corrosion, now generally accepted, grows out of the fact that preparation of iron from the ore mined from the earth requires the expenditure of heat or electrical energy and conversely the reversion of iron to its original state involves liberation of heat or electrical energy. With corrosion in progress on a pipe line through chemical reaction, at least part of the liberated energy is in the form of electric current and such currents are determinable by measuring along the line with instruments. Reversion of iron or steel to its most stable condition in the soil may involve various stages of chemical reaction with the final formation of ferric oxide, ferric hydroxide, or a combination of both which form the familiar iron rust.

The soil, when the moisture content is sufficient, becomes an electrolyte. An electrolyte is a medium that allows electric current to flow and produce chemical reaction at the surfaces of the metals in contact with it. The soil under such conditions allows diffusion of the chemicals present.

The pipe lies in the electrolyte so conditions are conducive to chemical or electrical action.

Moisture must be present in all corrosive action at normal temperature. Pipe that has not been subject to moisture will show no signs of corrosion.

The known factors that enter into the causes of corrosion are numerous. A few that contribute to the most severe cases are listed:

1. Easy access of oxygen to the line through water or soil. This is best illustrated by the rusting of unprotected iron in the open air. With few exceptions where there is corrosion, the red or brown color of rust appears, showing that oxygen has reached that point along the line.

2. Different chemicals in adjacent soils—strata formations. Under this head is probability of chemical reaction and current generation from the same metal lying in two different electrolytes.

3. Difference in chemical concentration. Here the action will be similar to that under 2.

4. Biochemical or catalytic reduction of salts in the soil to form more active compounds. This accounts for excessive corrosion that occurs in soils laden with chemical constituents which are not highly corrosive in their natural state, particularly calcium sulfate (gypsum).

5. Electrical potential differences that exist in the soil. The effects from these differences are not definitely determinable on the line, but field work shows that such currents will be existent and they account for some degree of corrosion.

6. Stray electrical currents from direct current operated equipment using a grounded return. This accounts for much of the corrosion that occurs near municipalities with electric street railways, mining districts that use direct current, and electric interurban railways.

7. Decomposition of organic material. This accounts for some of the corrosion that appears in swamps, barn lots, oil-soaked ground, and backfills which contain decomposable organic material.

Swabbing Is Hard on Wire Lines and Other Equipment Around the Rig

Swabbing is not done as much as it was a few years ago as a method of getting oil. What is the reason? I know it is not a cheap production method, but it gets the oil quickly and in a lot of cases that is the main thing.—H. S. E.

Swabbing does get the oil quickly, but most flush fields nowadays are produced under restrictions and there is no reason for using an expensive method of production when an efficient and less costly one will yield all the oil that may be lifted under existing regulations. Swabbing probably is the most expensive method of producing oil mechanically. It is hard on wire lines, bullwheels, bullropes, belting, sheaves and other equipment around the rig, besides requiring excessive power. There are important uses for the swab in the oil field, but except under unusual conditions the lifting of oil from a well is not among them. In other years swabbing was practiced in many flush fields when the producer's chief interest lay in getting all the oil possible in the shortest possible time.

WHY THEY CALLED IT *Iron*

The Germans gave us our word "iron." In Old High German it is encountered in several different forms, as "isan," "isen" and "isarn," all coming from an early Teutonic root, "iren." An iron bell called the "scufang," preserved in the Wallfram museum, Cologne, Germany, is believed to have been made in 613 A.D. The character of the wrought iron in it points to familiarity with the art of iron-working. It is not known just how early the Germans began making good wrought iron. "Wolf furnaces," or "stuckofen," existed in German countries in the eighth century. A guild of forest smiths made iron of high quality in these furnaces in the Nassau districts, in the Hartz Mountains and in Siegen, Saxony. When a German warrior died wrought-iron weapons which he had used were heaped upon his bier.

Hollow-Rod Method of Pumping Has Restricted Field of Usefulness

In one of your answers to a question concerning the hollow-rod method of pumping wells you told in a general way about conditions under which this method is used and indicated it was used in Mid-Continent, Gulf Coast and California fields only. I would appreciate a little more definite information along this line. For instance, does the depth of the well make any difference? Do these hollow-rod pumps work the same as the ordinary oil-well plunger pumps? Are they as efficient?—O. S. R.

Hollow-rod pumps function in the same manner as all oil-well plunger pumps, with the exception that the oil does not come in contact with the tubing, but is lifted up through the hollow rods. This feature adapts the hollow-rod pump to pumping sand and water. In a discussion of this subject in his book on "Oil Well Completion and Operation," H. C. George, head of the school of petroleum engineering in the University of Pittsburgh, says it is an established fact that quantities of sand may be pumped with the oil by most any of the steel plunger pumps, but if the well pumps heavy viscous oil and water and sand, the sand is much more troublesome because greater quantities are lifted, and the water tends to permit it to settle out and pack. Under these conditions sand is settling continuously on the plunger in wells using the regular style of working barrel. With a hollow-rod outfit it is customary to pour clean oil around the outside of the upset tubing as a lubricant for the plunger.

Experience has shown, however, that hollow-rod pumping is seldom successful for depths greater than 1,500 feet, although in exceptional cases with well-balanced beams and slow pumping speeds, wells of 2,000 feet deep may be pumped. The actual pumping efficiency probably does not compare favorably with ordinary oil-well pumps of the same size because of the smaller area of the hollow rods through which the fluid must pass. If there were no leaks past the valves, the hollow-rod pump would pump on both strokes, because on the upstroke it would lift the fluid standing inside the hollow rods in the usual manner, and on the downstroke the plunger would displace the fluid which had been sucked into the working barrel on the upstroke. The fluid taken into the barrel on the upstroke theoretically fills the 3¼- or 3⅜-inch working barrel, as the case may be; and as the plunger recedes, this fluid is forced into 1½- or 2-inch upset tubing. Thus, the difference in cross-sectional area between the hollow rods and working barrel would compel the fluid to move upward and out through the hollow rods during the downstroke. The reduction in area and consequent increase in relative motion between the fluid and tubing results in an increased fluid friction and decreased pumping efficiency, but the sand is kept in suspension. Nevertheless, large working barrels can be used with this type of pump, and for that reason the pump is adapted to pumping large volumes of fluid. Hollow rod pumping is by no means a theoretical method, but actually is employed with success on many California wells.

Several years ago Professor George says he saw two wells in the Humble field of Texas producing large quantities of water, oil and sand by means of hollow rods which were used to introduce water into the tubing through a special perforated nipple placed between the traveling valve and the hollow rods. The velocity of the fluid from the tubing was so increased by the additional water introduced that large quantities of sand were ejected with the oil, and without causing sanding-up of the working valve.

Alcohol in Gasoline Discussed as Engineering Problem

At the recent meeting of the Western Petroleum Refiners Association, Dr. George Granger Brown, professor of chemical engineering at the University of Michigan, delivered a paper describing tests and the results of experimental work done on blending alcohol with gasoline for use as motor fuel. Many important points were brought out in his discussion and are given in the following paragraphs extracted from his article.

Doctor Brown states that there is no doubt that alcohol blends have been, are and can be used as motor fuels without loss in maximum power output of the motor, but only with an increase in consumption and more difficult operation in cold weather.

In discussing road tests he states that probably the most reliable road tests are the "official tests of regular and alcohol-blended gasoline motor fuels" made by the U. S. Bureau of Standards in collaboration with the American Automobile Association Contest Board in June, 1933. These tests were made with a 10 per cent alcohol blend having an octane number of 75. The straightrun gasoline used in the tests had an octane number of 7, which was increased only three octane numbers by blending of 10 per cent of alcohol. Results of these tests were that the fuel consumption when using a 10 per cent alcohol blend will be increased from 2 to 5 per cent when the motors are adjusted for equal performance.

Some conclusions of his article are as follows:

"Because alcohol blends are inferior motor fuels to the straight, unblended gasoline for general use, the use of such blended fuels can be economically justified only if they are available at a proportionately lower cost. The U. S. department of agriculture (senate document No. 57, seventy-third congress, first session, May, 1933) has carefully calculated the delivered cost of 99.5 per cent alcohol as from 27.2 to 31.4 cents per gallon when produced from corn costing 25 cents per bushel; and from 51.5 to 65.7 cents per gallon when produced from 75-cent corn. Using the average price of corn for the period from 1920 to 1933, as given in the Statistical Abstract of the United States, 1934, p. 600, as 66.8 cents per bushel, the cost of alcohol delivered at the point of blending would be approximately 47.3 cents per gallon. These costs are net after deducting the return that distillers would receive from the sale of the 'distillers' grain' or 'protein seed' back to the farmers.

"Although some savings may be accomplished by improved operation, alcohol produced by fermentation of farm products cannot be sold profitably, f.o.b. plan, at less than 25 cents per gallon when paying 45 cents per bushel for the raw material as compared with a current price of about 6 cents per gallon for gasoline, f.o.b. refinery.

"This means an increased cost in motor fuel of 30 per cent for each 10 per cent of alcohol which is blended therewith, an increase which is entirely unjustified since the resultant fuel is an inferior product.

"Claims of increased mileage by the use of the alcohol blends are not based on equivalent performance, as all reliable tests indicate an increase of 3 to 5 per cent in fuel consumption when adjusted for equivalent performance with the same engine. In order to insure the same degree of freedom from vapor lock, it is necessary to extract about 2 per cent of the light end, such as butane, in the present fuel with corresponding increased difficulty in starting in cold weather.

"Claims as to superiority due to increased octane number are without significance as the increased efficiency obtained by the increased octane number does not compensate for the increased consumption brought about by the decreased energy content due to the blending of the alcohol. Furthermore, the petroleum industry is now producing fuels of higher octane than alcohol itself.

"Difficulties due to separation have and are causing trouble to the distributors of alcohol blends.

"Even if alcohol blends could be used with equally satisfactory results in all respects as straight gasoline, the increased cost, about 30 per cent for each 10 per cent of alcohol in the blend, makes such practice most uneconomical at the present time."

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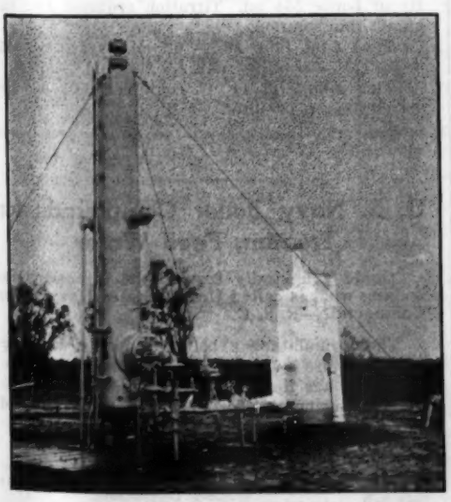
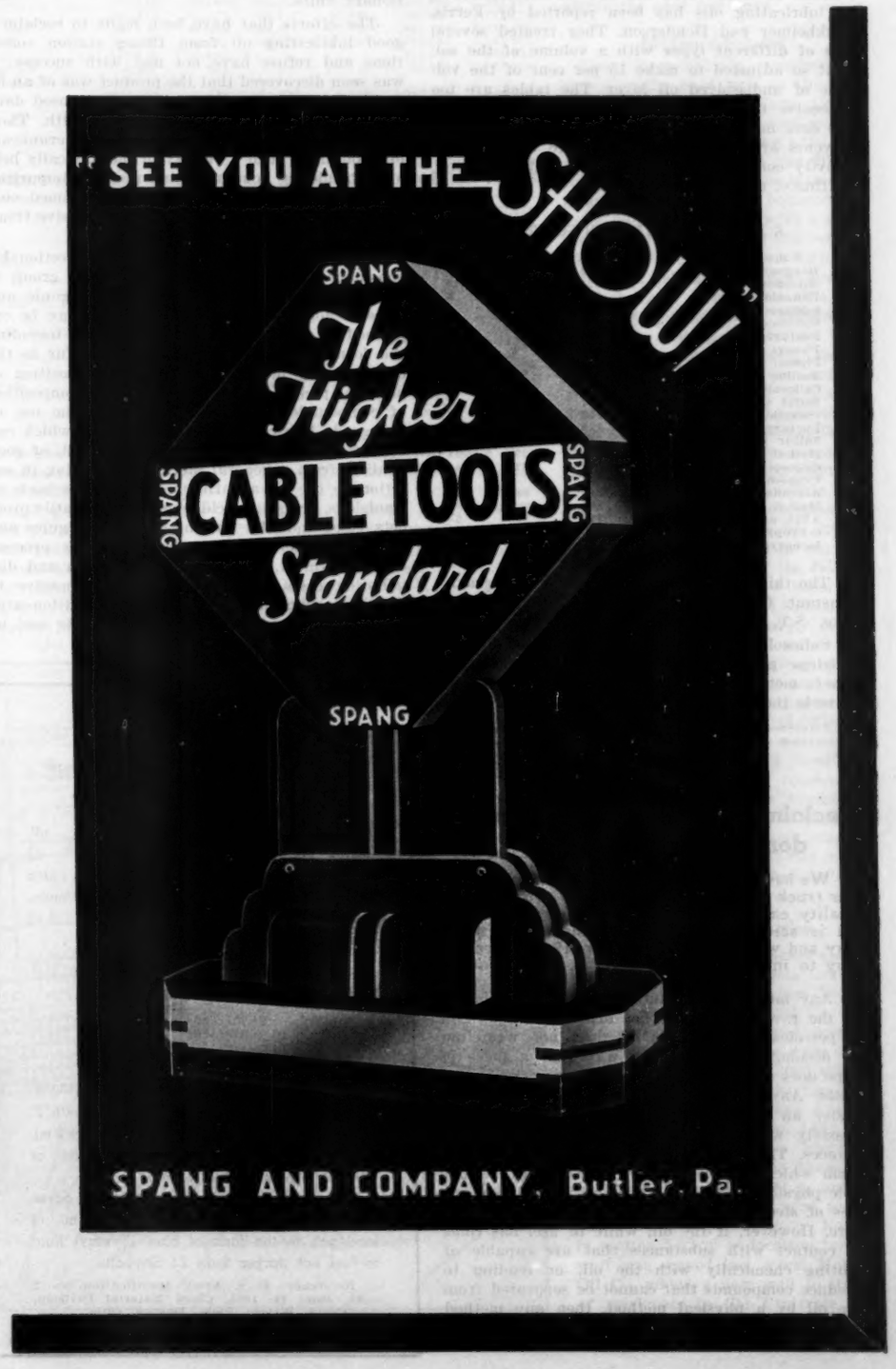


Installation on Continental Oil Co. property, Basile, La. Field of individual well separator hook-up on high pressure well. The separator is an 1,800-pound working pressure type. Note ice on gas scrubber

(Photo courtesy of National Tank Co.)



QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Standing of Liquids Suggested for Solvent Extraction Methods

Is it possible for you to give us information that will indicate the relative merits of the several liquids that are proposed for the solvent extraction of lubricating oils? Do you know of any good articles on this subject?—G. S. T.

An extended investigation of numerous substances of some value for the solvent extraction of lubricating oils has been reported by Ferris, Birkheimer and Henderson. They treated several oils of different types with a volume of the solvent so adjusted to make 15 per cent of the volume of undissolved oil layer. The tables are too extensive to reproduce here, however, several of the data may be used from the table in which the solvents are tabulated according to the viscosity gravity constant (V.G.C.) of the undissolved oil, raffinate, fraction.

ACTION OF EXTRACTION SOLVENTS

No.	Substance—	V.G.C.	C.S.T.,°C.	S.T.,°C.
1.	Benzonitrile	.822	26	10
2.	Nitrobenzene	.823	26	10
3.	Benzaldehyde	.824	20.5	0
4.	o-Nitrotoluene	.829	8	0
5.	Pyridine	.829	12	0
6.	Furfural	.829	125	98
7.	Phenyl acetate	.829	50	25
8.	Phenol	.830	53	65
9.	Aniline	.832	59	65
10.	Cellosolve acetate	.835	27	0
11.	Butyl carbitol	.837	22	0
12.	Cresylic acid	.838	23	10
13.	Furfuryl alcohol	.839	154	125
14.	Sulfur dioxide	.840	...	—7
15.	Methyl cellosolve	.841	123	98
16.	Cellosolve	.842	61	40
17.	Propionaldehyde	.842	...	0
18.	Acetone	.843	53	30
19.	Methyl acetate	.850	above b.p.	40
20.	Allyl alcohol	.852	86	65
21.	n-Propyl alcohol	.865	37	10
22.	Isobutyl alc.	.871	14	5

The third column is V.G.C. or viscosity gravity constant. C.S.T. is the critical solution temperature. S.T. is the temperature of separation.

Cellosolve acetate is the monomethyl ether of ethylene glycol; butyl carbitol is the monobutyl ether; methyl cellosolve the dimethyl ether; cellosolve is the monomethyl ether of ethylene glycol.

Reference: Ferris, Birkheimer and Henderson, Solvent Extraction of Lubricating Oils, Ind. Eng. Chem., 23, 753, 1931.

Reclaimed Oil From Drainings Seldom of Satisfactory Quality

We have been reclaiming lubricating oil from our truck drainings which appears to be of good quality except that the smell is strong and the oil is acid. Does much reclaimed oil act this way and what is the reason for it? Is there any way to improve this?—C. H. G.

Any method of manufacture must be adapted to the raw material. It has often been said that a petroleum lubricating oil does not wear out or decompose in the same way that a piece of rope does or an article made of iron corrodes and rusts. Any oil collecting after use in the sump under an engine would still be oil, but mixed possibly with water, dirt, sand and other substances. This may be just a mechanical mixture from which the oil may be recovered by a suitable physical method in the same way that particles of steel may be separated from a sand mixture. However, if the oil, while in use, has come in contact with substances that are capable of uniting chemically with the oil, or tending to produce compounds that cannot be separated from the oil by a physical method, then any method for reclaiming the oil must include both physical methods and chemical treatment.

It has been the practice for many years for large industrial units to recover lubricating oil. The new oil used by such units has been of one type, that is pure mineral oil which had not been used under conditions to permit contamination of a chemical nature. When automobiles and trucks began to be used on a large scale under one management, the established methods for reclaiming lubricating oil were applied to crankcase drainings, but not with the same success as for stationary units.

The efforts that have been made to reclaim a good lubricating oil from filling station collections and refuse have not met with success. It was soon discovered that the product was of an inferior quality and in many instances caused damage to the parts it came in contact with. Thorough investigation revealed that most crankcase oils contained such a variety of mechanically held and chemically combined objectionable impurities that an oil safe for use could be reclaimed only when purified by complicated and expensive treating methods.

One of the most serious of the objectionable substances found in crankcase oil is a group of acids which appear to include both organic and mineral acids. The presence of these may be explained as possible from several sources, including the formation of sulfur acids from sulfur in the oil, aided by moisture and air, decomposition of material picked up from the roads, decomposition of compounded oils and greases and the use of low grade lubricants. The only method which can be applied for obtaining a lubricating oil, of good quality, from a general mixture containing in addition to the oil a variety of substances such as emulsions, acids and acid compounds, volatile products, color and odor-forming compounds, gums and mineral matter, is a complete refining process. Such treatment, together with collection and distribution costs, usually proves too expensive to put the product on the market in competition with the price charged for the lubricating oils sold by the reliable refiners.

SPECIFICATIONS

U. S. ARMY AIRCRAFT ENGINE FUEL—GRADE 92

Water and suspended matter	nil.
Octane number, min.	92
Corrosion, copper dish	no gray or black
Gum, accel. test, max.	10 mgm.
Sulfur, total, per cent	0.10
Distillation, evaporated, min.	
% at	°F.
10	167
50	212
90	275
Sum of temps., at 10 and 50% points shall be min. 307.	
Vapor pressure, max.	7 lbs. at 100°F.
Freezing point	—76°F.
Water tolerance	+2 ml.

Source—A petroleum product. Lead or aromatic hydrocarbons may be added.

Color.—The color and shade shall agree with, and not lighter than that of 3 ml. of lead/gal. in the form of blue 1T ethyl fluid to fuel not darker than 21 Saybolt.

Reference: U. S. Army Specification No. 2—95, June 19, 1935, Chief Material Division, Air Corps, Wright Field, Dayton, Ohio.

Winkler Method for Determining Dissolved Oxygen in Water

Please advise the most suitable method for the quantitative determination of dissolved oxygen in boiler water.—C. E. B.

The determination of dissolved oxygen in water may be made by the Winkler method. This method was first described nearly 50 years ago and may now be found in any of the standard books on analysis and the special books on water analysis. The essential details of the method follow.

Sample. A small bottle, 250 ml. to 350 ml. capacity, exact capacity predetermined, should be filled and emptied four times with the water, then filled and stoppered to exclude air.

Solutions required.

(a) Manganous sulfate, 48 grams in 100 ml. distilled water.

(b) Sodium hydroxide, 360 grams, and potassium iodide, 100 grams, in 1 l. of distilled water.

(c) Hydrochloric acid conc.

(d) Sodium thiosulfate N/100 solution. Make this as needed from N/10 stock.

(e) Starch made into thin paste with cold water, diluted to about 200 times its weight with hot water and then boiled for two minutes.

Method. Add to the sample, delivering from a pipette below the surface, 2 ml. each of solutions a and b. Stopper and shake. Then add 2 ml. of HCl; again shake until precipitate has dissolved. Transfer to a beaker and titrate with solution d, adding starch indicator (e) when color approaches a faint yellow.

Calculation data.

N = cc. N/100 thiosulfate solution.

(1) Oxygen in p.p.m. $= \frac{.0008N \times 1{,}000{,}000}{100} = .8N.$

(2) Oxygen in cc. per liter = .7 oxygen p.p.m.

(3) Oxygen per cent saturation = Oxygen p.p.m. (observed temp. and pres.) / Saturation oxygen p.p.m. (observed temp. and pres.)

Example. Temperature of water 14° C. Capacity of bottle 354 ml. Titration required 14.2 ml. stand. thio solution.

Then 1 ml. thio. sol. = 0.1 ml. oxygen. ∴ 14.2 = 1.42. ∴ 354 ml. = 1.42. ∴ 1,000 ml. = 4.01.

This sample at 14° C. contained 4.01 ml. dissolved oxygen per liter.

Note: This method not to be used in presence of nitrates. See Chem. Abs. 9, 674, 1915.

U. S. Navy Boiler Compounds for Treating Feed Water

Could you kindly furnish the directions for making what is called United States Navy Boiler Compound?—R. S. C.

The formula for a boiler compound was suggested for use by the U. S. Navy Department, several years ago for the purpose of inhibiting corrosion and embrittlement of metal. The compound may be prepared according to the table.

NAVY BOILER COMPOUND

	Per cent (weight)
Soda ash	87
Trisodium phosphate	10
Starch	1
Tannic acid	2

The materials should be well powdered and thoroughly mixed, then added to 1 gallon of soft water. The solution is placed in the feed water. The quantity required will vary with the water to be treated.

California Field Report

By L. P. STOCKMAN

OUTPOST AT PLAYA DEL REY BLOWS IN OUT OF CONTROL

LOS ANGELES, Calif., May 4.—The Eastern Oil Co. focussed the attention of operators on the Playa Del Rey field of Los Angeles Basin this week when its No. 1 D. R. L. & W., an outpost located rather far out on the north flank of the structure, blew in out of control from a depth of 7,339 feet and continued to blow mud, water and gas for approximately 48 hours. It required 30 tons of weight material and 1,200 tons of heavy mud to bring the well under control. The well blew in unexpectedly and consequently the company was unprepared to cope with the situation, especially in view of the fact that the bit had only penetrated the conglomerate for approximately a distance of 2 feet. It is too early to venture a guess as to the significance of this gas blowout, although it is within the realms of possibility that there might be another fold in close proximity to the location of this wildcat. The Eastern Oil Co.'s test is approximately 3,000 feet away from the nearest production in Playa Del Rey field and its showing was rather surprising in view of the depleted condition of the productive formations and also because of the showing of the Ohio Oil Co. No. 18 Recreation, which is located between No. 1 D. R. L. & W. and the older section of the field.

Ohio No. 18 Recreation, which is itself an outpost, was given a production test a few days ago but it was only good for 140 bbls. of 21.8 gravity oil per day from 6,380 feet. In addition to the relatively small production registered by this well, the quality of oil produced was also unsatisfactory as it showed a water cut of approximately 35 per cent. The Eastern Oil Co. has brought its test under control but it will probably be another 30 days before a production test is concluded as the company must now land a water string and then drill down to the top of the Schist before passing the well for production. In the Palisades section of the Playa Del Rey field, the Royalty Service Corp. has successfully completed its No. 1-F doing 348 bbls. of relatively clean 22.7 gravity oil per day on a compressor from 6,404 feet after the hole had been finished with a 5¾-inch liner carrying 125 feet of perforated. The Union Oil Co. should chalk up the next completion in the Playa Del Rey field as its No. 13 Del Rey is being prepared for a production test following the conclusion of drilling operations at 6,061 feet.

Redondo Beach

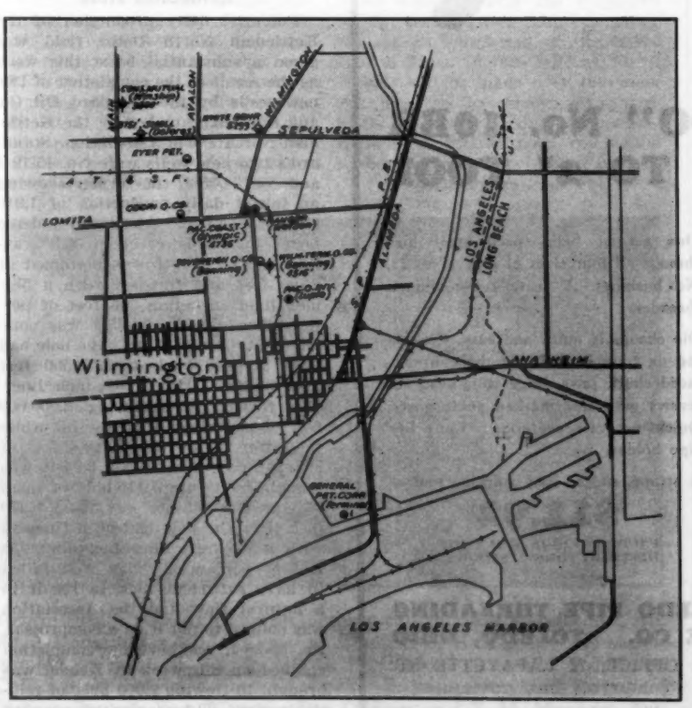
The Redondo Beach city council has reached a decision to limit future development to the drilling of not more than one well to each acre. This decision will prevent town lot development and should end a controversial subject which has prevented operators from proceeding with work. The new ordinance requires operators to file a map indicating their specific leases and further stipulates that operators must first secure a drilling permit before starting derrick construction. Although this new ordinance will restrict drilling operations by preventing town lot development, it appears probable that approximately 50 rigs will have been erected before the close of another 30 days. The Petrol Corp. has acquired the holdings of Thomas R. Clark involving approximately 40 acres and, in conformity with provisions of the assignment, must start one new well on or before May 24 and within 30 days thereafter must keep two strings of tools in operation until a total of 12 wells has been drilled. Four new wells were started in the Redondo section of the Torrance field during the current week and a check indicates the probability that six more will be spudded in within the next few days.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	April 19		April 12			
Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	180,767	25,824	.....	.....	1,830,886	2,034,164
Kerosene	40,423	5,775	79,040	11,291	505,419	513,280
Foreign exports—						
Crude oil	179,118	25,588	244,474	34,925	2,897,001	3,293,973
Fuel oil	287,816	41,117	84,317	12,045	3,007,427	3,571,118
Diesel and gas oil	222,723	31,818	21,511	3,073	1,488,009	1,119,985
Gasoline	310,417	44,345	102,623	14,660	1,935,596	1,488,900
Kerosene	143,726	20,532	.....	.....	309,040	331,731
Other unfinished oil	6,936	991	.....	.....	13,375	53,205
Coastwise-domestic:						
Crude oil	294,129	42,018	65,212	9,316	2,052,935	1,570,015
Fuel oil	176,306	25,187	114,117	16,302	2,756,611	2,462,070
Diesel and gas oil	6,594	942	11,930	1,704	448,260	247,244
Gasoline	228,477	32,640	295,378	42,197	4,044,901	2,288,094
Kerosene	.....	.....	8,684	1,241	79,586	37,561

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	157,258
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	60,950	8,707	.....	.....	60,950	71,325
Lubricants	10,521	1,503	.....	.....	18,129	12,381
Foreign exports—						
Crude oil	317,092	45,299	.....	.....	946,001	550,129
Fuel oil	40,001	5,714	30,565	4,366	1,149,782	527,054
Diesel and gas oil	86,094	12,299	.....	.....	230,787	351,784
Gasoline	21,460	3,066	249,101	35,587	987,753	782,360
Kerosene	79,713	11,388	.....	.....	243,420	216,283
Lubricants	16,799	2,400	.....	.....	90,587	74,411
Coastwise-domestic:						
Fuel oil	252,865	36,124	34,160	4,880	2,383,179	1,754,537
Diesel and gas oil	.....	.....	18,631	2,662	179,703	79,662
Gasoline	29,736	4,248	182,071	26,010	1,409,965	1,259,233
Kerosene	.....	.....	11,080	1,583	55,772	18,109



Increased wildcat activity, Wilmington district, Los Angeles Harbor

Midway-Sunset

The Gibson Oil Co. completed an exceptionally good well in the Midway-Sunset field of Kern County when No. 2 O'Brien, in section 6-11-23, was brought in flowing 1,152 bbls. of clean 24.6 gravity oil and 260,000 feet of gas per day. The gas from this well, which was bottomed at 3,002 feet and finished with an 8⅝-inch water string landed and cemented at 2,906 feet, contains a little better than 2 gallons of natural gasoline to each 1,000 feet of gas. The Gibson Oil Co., which is at present rigging up to redrill and deepen No. 2 Hart & Dearin, is building rig for No. 2 Westside Lumber Co., and has staked location for No. 2 Francis. The General Petroleum completed an excellent well in the Midway-Sunset field on April 30 but the large production developed was not surprising as the oil sand cored in this well, No. 1 Main Line, was exceptionally well saturated and was by far the best looking sand found in any well drilled in this section of the field up to the present time. No. 1 Main Line was brought in flowing 1,830 bbls. of relatively clean 22.7 gravity oil per day from 2,827 feet. The water shutoff was effected by a string of 8⅝-inch landed at 2,658 feet and a secondary shutoff made by cementing through perforations in the 6⅝-inch liner at 2,674 feet. The well is producing from 153 feet of formation. The Richfield Oil Co. recompleted No. 10 Maricopa in the Sunset section of the Midway-Sunset field and returned it to production pumping 280 bbls. of clean 22.9 gravity oil per day after the hole had been redrilled and deepened to 2,605 feet.

Buena Vista Lake

The Ohio Oil Co. completed another gas well in the Buena Vista Lake gas field of Kern County when No. 6-A on the Kern County Land Co. lease in section 32-31-26 showed commercial production. This new well, which flowed at the rate of 5,000,000 feet of gas per day on a recent formation test, was brought in doing 8,740,000 feet of gas per day from 4,676 feet. It is flowing through a 30/64-inch bean under a pressure of 900 pounds on the tubing and 1,700 pounds on the casing. The Ohio's next test in this field is expected to be No. 7-A in section 5-32-26 as location for this well was staked last week. Mohawk Oil Co. added a new well to its list of producers in the Fruitvale field on April 29 when No. 1 Osborn in section 23-29-27 was brought in flow-

ing 212 bbls. of clean 22.6 gravity oil per day from 3,780 feet. The Western Gulf Oil Co. No. 2 Red Ribbon came in wet on a production test a few days ago and the 8⅝-inch water string landed at 3,400 feet was remented. The Trico Oil & Gas Co., discoverer of the Delano gas field of Kern County, is rigging up rotary drilling equipment on No. 1 Knowles in section 23-29-27 preparatory to an early spud. This will be the company's first test in the Fruitvale field.

Lost Hills-Belridge

If the Standard Oil Co. was in the salt water business its No. 1 United in the Lost Hills field would be considered an asset of extreme importance because this test, bottomed at 6,335 feet, blew in a few days ago flowing approximately 50,000 bbls. of hot salt water per day. This high head water in the Lost Hills field has persistently prevented operators from making successful deep tests over a period of several years. The performance of this well is of special interest because of the fact that geological data indicates that there is an affinity between the South Dome of Kettleman Hills and Lost Hills. The south end of the Kettleman South Dome and the northern end of Lost Hills lacks closure and it has been assumed that the two areas constitute one structure instead of two. The significance which attaches to the large flow of salt water in the Standard's test at Lost Hills lies in the fact that the Ohio Oil Co. brought in a 50,000-bbl. hot salt water well in the South Dome of Kettleman Hills a few years ago. This high head water zone appears to be a dominant characteristic of each area and tends to confirm the opinion that these two domes constitute one structure. The Associated Oil Co. also found this high head water zone in its Lost Hills test which was drilled about two years ago and drilling operations were subsequently suspended and the well abandoned. The Associated made very elaborate preparations to overcome this water problem but found it necessary to land a new string of casing every time high head water was encountered. Finally the hole got down to the point where it was no longer possible to use any more casing and operations were suspended.

The Belridge Oil Co., discoverer of deep production in the North Belridge field of Kern County is expected to complete another new well in the deep zone in this area within the next few days as No. 6-1 in section 1-28-29 is standing cemented on top of the pay. Completion may be delayed for another 15 days, however, if the company decides to drill ahead in the pay instead of producing from the upper member. The Continental Oil Co. is making splendid progress with its No. 7 Result in this field and with the bit rotating at 7,500 feet this potential producer may be finished within another three weeks. In the Edison field, the Buffalo Oil Co. finished its No. 1 Santa Fe in section 21-30-29 and this new well was brought in pumping 120 bbls. of relatively clean 18.1 gravity oil per day from 3,279 feet after the hole had been finished with a 5¾-inch liner carrying 285 feet of perforated. The M. & L. Oil Co. No. 1 Stockman in section 23-30-29 proved to be somewhat of a disappointment as it was only good for 51 bbls. of 18.1 gravity oil cutting 10 per cent upon completion at 2,011 feet. Drilling operations in the Mountain View field of Kern County have reached the point where selective drilling has become the rule rather than the exception. Heretofore, operators have had plenty of potentially productive acreage upon which to drill but now they find it necessary to carefully select the best locations. As a result of this condition, operators are feeling their way along out in the extreme eastern end of the structure. During the current week, the Shell completed No. 7 on Porter lease No. 2 and followed up this success by completing No. 9 on Porter lease No. 2 a short time later. No. 7 Porter was completed flowing 458 bbls. of exceptionally clean 29.9 gravity oil and 1,639,000 feet of gas per day from 5,818 feet. No. 9 Porter was brought in flowing 490 bbls. of very clean 28.2 gravity oil and 430,000 feet of gas daily from 5,940 feet.

Kettleman Hills

Potential daily production of the Kettleman North Dome field was given a substantial boost this week as the result of the completion of two new wells by the Standard Oil Co. and a similar number by the Kettleman North Dome Association. Standard's two new wells were No. 45-19-J and No. 34-35-J, the former showing an initial daily production of 1,910 bbls. of clean 35.5 gravity oil and the latter 1,000 bbls. of clean 36.8 gravity oil. No. 45-19-J was bottomed at 8,760 feet and finished with a 5¾-inch liner including 245 feet of perforated while No. 34-35-J was completed at 8,318 feet after the hole had been plugged back from 8,500 feet and finished with a 6⅝-inch liner. The former is producing 2,900,000 feet of gas along with the oil while the latter is flowing 1,590,000 feet of gas per day. Kenda No. 34-1-P was brought in flowing 1,110 bbls. of clean 34.3 gravity oil per day from 8,270 feet after the hole had been finished with a 4½-inch liner including 258 feet of perforated. This well failed to have sufficient kick to result in a natural flow and the Association was obliged to put it on a compressor. No. 85-28-J, another new completion chalked up this week by Kenda, was brought in flowing 1,980 bbls. of relatively clean 32.4 gravity oil per day from 8,321 feet after the hole had been plugged back from 8,515 feet and finished with a 6⅝-inch liner carrying 660 feet of perforated.

In the Round Mountain field of Kern County, the Honolulu Oil Corp. completed its No. 88 in section 18-28-29 after having battled a gas zone a week previously. This new well, which blew in prematurely last week, was finally completed a few days ago after the hole had been carried down to 1,880 feet and finished with a 6⅝-inch liner carrying 60 feet of perforated. It showed an initial daily production of 299 bbls. of 17.8 gravity oil and is flowing through a five-eighths-inch bean under a pressure of 385 pounds on the casing. Honolulu Oil Corp. should have No. 77 in section 18-28-29 on production within the next day or two as it is at present being bailed down. The Shell is expected to complete two new wells in this field within the next fortnight and with four additional locations staked will probably have several more tanking oil before the close of May. These shallow wells can be drilled from spud to completion in 15 days and hence a rig one week is often making hole at 1,500 feet the next.

Kern River

The West Front section of the Kern River field showed a substantial increase in development work this week and judging by the number of locations staked will show another appreciable gain during the forthcoming seven-day period. The Kern River Oilfields Co. completed its No. 1-B in section 25-28-27 and this new well was brought in pumping 228 bbls. of 16.1 gravity oil cutting about 6 per cent. This well was bottomed at 2,045 feet and has the 8⅝-inch water string landed and cemented at 1,845 feet. The Standard Oil Co. No. 2 Ward fee in section 24-38-27 proved good for 213 bbls. of 15.6 gravity oil per day on the beam following completion at 2,014 feet. The Texas Co. No. 13 Lehman proved to be a good well as far as volume was concerned following completion early in the week but the output, 271 bbls. of 14.9 gravity oil, showed a water cut of 8 per cent. The well seems to be cleaning up, however, and may yet get under the pipe line requirements which provide that any oil run must not cut in excess of 3 per cent except in special instances. This new well was brought in from 2,180 feet after the hole had been plugged back from 2,560 feet and finished with an 8⅝-inch liner carrying 381 feet of perforated.

Santa Fe Springs

Several wells were put on production in the Santa Fe Springs field this week but only one of them was a new completion. This was Union Oil Co. No. 96 Bell which was brought in pumping 272 bbls. of 32.1 gravity oil per day from 4,031 feet. The Associated Oil Co. recompleted its No. 2 Jordan after plugging back the hole from 4,743 feet to 4,570 feet and returned it to production pumping 202 bbls. of 34.9 gravity oil per day. The Texas Co. No. 11 Patterson failed to come up to expectations upon being redrilled as it was only good for 51 bbls. of dirty oil per day from 4,550 feet. In the Long Beach field, the Texas Co. reconditioned its No. 1 Neese and put it back on the beam pumping 66 bbls. per day from 4,800 feet. The R. R. Bush Oil Co. No. 4 Barnes, another recom-

(Continued on Page 60)

YOU BET
THIS "TOLEDO" No. 10BR
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One set of high speed steel dies threads all four sizes of pipe 1" to 2". No bushings. A truly self-contained threader.

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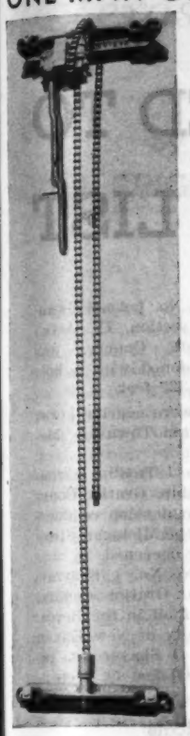

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Among Gulf Coast Drilling Contractors

C. & C. Drilling Co. is preparing to complete Dick Schwab and C. & C. Drilling Co. No. 1 Bennett at the South Houston field, Harris County, and the rig will be moved to a wildcat location in Polk County to be drilled on the Kirby Lumber Co. lease for the same operators. The Bennett test is bottomed in oil sand at 4,776 feet and it will extend production approximately 1,200 feet to the northwest. At the Cotton Lake Prospect, Chambers County Salt Dome Oil Co. and others No. 2 Lawrence is drilling below 7,000 feet.

Cron and Gracey have 10 active rigs; 3 at Iowa for Shell Petroleum Corp., 1 at Roanoke for the same company, 1 at Manvel for Texas Co., 1 at South Houston for Stanolind Oil & Gas Co., 1 at Barbers Hill for Sinclair Prairie Oil Co., 1 at Damon Mound for the same company and 2 at Placedo for Barnsdall Oil Co.

Edwards Drilling Co. is drilling below 5,600 feet on Kenben Oil Co. No. 1 Stewart at the Dickinson field, Galveston County, and has two active rigs on wildcat prospect in Hardin and Orange Counties for David B. McDaniel and Texas Canadian Oil Co.

Glenn H. McCarthy is preparing to complete No. 9 White at the Anahuac field for Humble Oil & Refining Co. and in Chambers County for himself No. 1 Pitt is drilling below 6,000 feet.

Rutherford Drilling Co. is making hole on three tests for Skelly Oil Co. at the Van Vleck field in Matagorda County and received contract for No. 2 Metzler to be drilled for the same company.

Smith and McDannald opened a new gas field in the Lakeview area in Wharton County for completion of an old hole temporarily abandoned in 1933 at 6,875 feet. The hole was completed at a plugged back depth of 3,283 feet and has a shut-in tubing and casing pressure of 1,575 pounds. It is on a block of approximately 5,500 acres and the fuel will be used in drilling a deep test. At St. Martinsville field, Tide Water Oil Co. No. 2 Smedes was tested through perforated casing from 6,640-55 feet, and showed for a large gas well and preparations are being made to complete. In the same field, Continental Oil Co. No. 1 fee is drilling in shale below 8,125 feet and has encountered several sands to be tested. Seven other rigs as follows: two at South Houston, one at Jennings, La., one at Louise, one at Long Lake, one at East Texas and one in Southwest Texas.

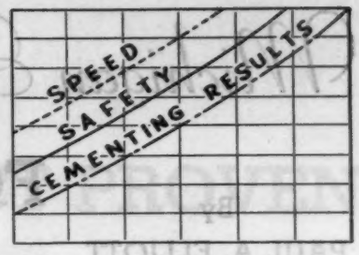
Rowan Drilling Co. is preparing to drill a second wildcat in Orange County for T. J. Wood and others, No. 1 Brown to be drilled to a contract depth of 7,000 feet. In the meantime progress is being made on five other holes: one in Harris County for Amerada Petroleum Co., two at the Pearsall field for Amerada Petroleum Co., and 2 at the Cayuga field for Tide Water Oil Co.

Nicklos Drilling Co. completed No. 1 Young as a producer in the Tepetate field for Continental Oil Co. and has reached the 8,300-foot oil sand in No. 1 Sonnier for the same company. No. 1 Young was completed in 25 days, one of the best drilling records in the field. At the Port Barre field, a rig is being moved in for Pan American Producing Co. No. 2 J. C. Cormier expected to reach the pay at approximately 5,000 feet.

Al Buchanan of San Antonio completed producers for the Humble Oil & Refining Co. in the Piedra Lumbre field, Texas Co. in the Loma Novia field and Blanco Oil Co. in the Seven Sisters field, all in Duval County, Southwest Texas. Besides drilling operations in these three fields, Buchanan rigs are active in the Plymouth field of San Patricio County, under contract with the Plymouth Oil Co. In the latter county, another attempt at completion of the Benedum & Trees Oil Co. wildcat No. 2 Welder will be made over the week end. The test has shown oil at two levels, but water production has prevented the wildcat from completion so far. After failing to find produc-

(Continued on Page 60)

Rowan Drilling Co. day tour on location at Amerada Petroleum Corp. No. 1 Dopslauf, a wildcat west of Houston in Harris County; standing left to right: H. Clark, W. H. Middleton, Amerada Petroleum Corp.; R. A. Hoyle, driller; Ed. Leslie, E. Jimmerson and Raymond Duffey. Seated: Roy Gilmore, Tim O'Hara and T. M. Mackey, Amerada Petroleum Corp.



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Michigan Field Report

FOURTEENTH POOL ADDED TO MICHIGAN'S PRODUCING LIST

By
PAUL A. ELLIOTT

MUSKEGON, Mich., May 4.—The Michigan Oil Producers Committee last week added a fourteenth oil field to the state's total, listing two upper Traverse wells in Geneva Township, Midland County, separately from the Porter-Yost field.

Simultaneously with its designation as a separate field, Geneva Township indicated possibilities of Dundee production when the King Drilling Co. No. 1 George Gould, SW NE NE section 19-15n-2w, struck a show at about 40 feet in the lower limestone.

The Gould well, a north offset to the discovery well brought in many months ago by the Brehm-Hollman Oil Corp., threatened disappointment when it failed to produce in the upper Traverse as the other two, but operators were hopeful last week it might open an important new field in Midland County.

Another field, opened last year but not yet developed enough to estimate its possibilities, was boosted last week with a second producer, T. F. Caldwell, Inc., No. 1 Charles W. Kraus, SW SW NW section 12-18n-3e, Gibson Township, Bay County. After acid treatment it produced at the rate of about 40 bbls. a day from the upper Traverse limestone first encountered at 2,022 feet and drilled 23 feet in.

The Kraus is an east offset to the discovery well drilled by M. C. Fordyce on the Suszko lease last fall. The new test is 5 miles west of the village of Standish. The Caldwell company holds acreage solidly within about a mile of the producers and will start a third test immediately. Crude is being trucked to the nearest railroad pending sufficient production to warrant a pipe line.

Production in the two new fields as yet is too small to have any great significance in the state total, still at low ebb of less than 32,500 bbls. daily. The Home Township, Montcalm County, upper Traverse pool, another comparatively small producing area, was the only one which showed any increase last week. The rest were unchanged or experienced a decrease.

Midland County

Four wells in Jasper and Greendale Townships, Midland County, added nearly 1,000 bbls. of new Dundee potential daily production.

Largest of the four was the Pure Oil Co. No. 2-D Laura E. Root, C N NE SE section 2-13n-2w, Jasper Township, which was rated at 700 bbls. after acid treatment, or nearly triple the natural flow. The Pure No. 5 Bond-Root, C S SW NW section 2, same township, also tripled in production from 120 to about 480 bbls. in the Dundee.

Two 100-bbl. wells also were completed, Pure No. 6-A Mattie Yost, C N SW SW section 35-14n-2w, Jasper, and Flynn & Larson No. 1 Ruby Greene, NW SE NE section 13, also Jasper, to be acid treated later.

Ward J. Blunt No. 1 D. E. Harrison, NW NW SW section 18-14n-2w, Greendale Township, swabbed 10 bbls. a day from the Dundee but will be tubed.

Crystal—Montcalm

Strange & Fortney last week struck the heaviest flow of any recent well in the Crystal Township, Montcalm County, field, when its No. 2 Rule, SE NE NW section 2-10n-5w, Crystal Township, started at 60 bbls. an hour in the Dundee.

Burnstein Oil & Gas Co. also struck oil in the No. 1 H. Fisher, SW SE SW section 36-11n-5w, Ferris Township, but had not yet tested for daily production.

Drilling activity moved toward the northeast corner of the Crystal and Ferris Township field with many drilling rigs already erected.

Two other tests were near completion, Stork Oil Co. No. 7 Dickenson, section 3, Crystal Township, and Daily Crude Oil Co. No. 3 Flint, section 35, Ferris. Both were expected to complete this week.

Daily Crude Oil Co. No. 6 H. P. Christensen, SW NW NE section 10-12n-6w, Home Township, Montcalm County, also was completed for several barrels production daily. It was to be swabbed.

Vickeryville

Oil Finders, Inc., backed by the Old Dutch Oil & Gas Co., Muskegon, Jetter Oil Co., formerly of Muskegon but now of central Michigan, and completed a "duster" on the A. N. Russell, SW SE SW section 29-10n-6w.

Located near the village of Sheridan and the discovery well in the Vickerville field, completion of the dry hole so close to production temporarily was a severe blow. Dundee was struck at about 3,200 feet and oil and gas at 3,243 feet. The hole was carried to 3,278 feet.

Star Petroleum Corp. also is expected to complete its No. 1 James Ward, NE NE NW section 20, a Bloomer Township wildcat about 3 miles southeast of the No. 1 Long, discovery well drilled by the Jetter Oil Co. several months ago.

Half a dozen other tests were drilling as the operators sought to find new production in an area less than 7 miles from the discovery well in Crystal field. Several operators were in the field to provide accurate means of checking formations and prospects in other tests.

Isabella County

McClanahan Oil Co. increased its daily production from nearly 60 successful wells by more than 200 bbls. daily when No. 1-A State, SW NE SW section 34-15n-3w, Denver Township, Isabella County, was starting pumping after acid treatment.

H. O. Butler, trustee, completed a dry hole in his No. 1 Jacob Selter, C NE NW section 6-15n-4w, Isabella Township and County. It was plugged and abandoned after striking show of gas in the Michigan Stray sands.

Pure Oil Co. started to abandon No. 1 Keeler-Mitchell, unsuccessful deep test in the heart of the Broomfield gas area, after testing the lower formations as well as the shallow Michigan Stray gas sands, the Traverse and Dundee.

Ogemaw County

A 50-bbl. Dundee producer was completed in the Dundee on the Hustead lease by the Richland Oil Co. It is located in SW NW SE section 36-22n-2e, West Branch Township, Ogemaw County.

Fortney Oil Co. abandoned a location on the Mary Jane Griffin lease, NE NE SW, same section. McClanahan Oil Co. is completing No. 2 Frank Heintz, NW NE NE section 24-22n-1e, Ogemaw Township and County.

Beaverton Township

Another 150-bbl. well was completed in the Beaverton Township, Gladwin County field last week when M. F. Whitehill No. 2 Omer Kintner, NE NW NW section 11-17n-2w, was completed in the Dundee.

Triangle Oil Co. was prepared to drill in this week from a depth of 3,843 feet, the point at which casing was set.

Sun Oil Co. also is plugging No. 1 James Reed, NW NW SW section 12-17n-2w, Beaverton Township, which drilled into water at 3,972 feet.

Gassers

Belvidere section of the Tri-Townships gas field of central Michigan was extended a mile west and half a mile south last week by the Rex Oil & Gas Co. of Muskegon and Alma, the No. 1 Bank of Detroit, NE NE section 6-12n-7w, which flowed 1,000,000 feet daily, only partially drilled into the Michigan Stray sands.

An extensive drilling program in section 5 is expected to result from success of the outpost. The Rex well was the first in the section.

Ide & Glavin No. 4 Gas Co. brought in a 10,000,000-foot well on the Louise Carlson and others lease, C SW SW section 20-13n-7w, Millbrook Township, Mecosta County.

Columbia Oil & Gas Co. No. 1 Arnette, section 23, Hinton Township, Mecosta County, was boosted from 8,500,000 to 20,000,000 feet by deeper drilling. It was the second successful gas deepening project in the township recently.

Flynn & Larson No. 1 Amol Swanson, C NE SE section 11, Aetna Township, Mecosta County, was plugged and abandoned with a hole full of water at 1,325 feet.

Two deep tests were nearing lower formations in Hinton Township, Mecosta County.

C. W. Collins No. 1 Tomlin, section 27, Sumner Township, Gratiot County, which failed to develop commercial production in the Michigan Stray gas sands, is being deepened.

McPherson & Co. No. 1 Sharrar, Sumner Township, Gratiot County, reported a show of oil in the Berea.

Open flow capacity of New Haven Gas & Oil Co. No. 1 Shaver was increased to 10,000,000 feet by deepening to 980 feet.

Wildcats

Three dry holes were reported from widely separate sections. D. A. Burris and M. Bliss Keeler failed to strike oil in the Dundee in No. 1 James and Jennie Moon, C SE SW section 11-2n-4w, Eaton Township.

Smith Petroleum Co. struck a dry hole in the No. 1 Morse Getty, NW SW NE section 20-10n-6e, Birch Run Township, Saginaw County, which was carried to the Dundee when it failed to produce in the Berea or Traverse. It will be abandoned at 2,644 feet, or 133 feet in.

Miller Brothers have abandoned No. 1 Mae Ryan, section 22, after recent unsuccessful treatment with acid.

Four wildcat locations were included in the list of 16 issued last week by the state conservation department.

Oil Freight Rate

EDMONTON, Alberta, May 2.—Effective May 1, the freight rate on fuel oil other than gasoline from Calgary to Fort McMurray via Northern Alberta Railway has been fixed at 74 cents per 100 pounds, a reduction of 25 cents. The reduced rate applies to tankcar shipments. Last year 500,000 pounds of fuel oil were transported by railway for use in northern mining development and steamship business.

S.W. Texas Hearing

AUSTIN, Tex., May 4.—The Texas Railroad Commission has set its hearing on the conservation and prevention of waste of oil and gas in Southwest Texas, particularly in Webb, Duval, Jim Hogg, Jim Wells Counties, for Thursday morning, May 7, at 10 o'clock. Orders for the conservation in the fields of those counties will be issued following the closing of the taking of testimony by the commission.

LAKEVIEW PROSPECT PROVEN AS GAS AREA BY LARGE WELL

By F. L. SINGLETON

HOUSTON, Tex., May 4.—The Lakeview prospect, approximately 6 miles north of the Pickett Ridge field and northeast of the town of El Campo, Wharton County, was proven for gas production when Smith and McDannald and others No. 1 Mitchell in the center of an 80-acre tract in section 8, H.&T.C. Survey, was completed at a plugged back depth of 3,283 feet as a large gas well. There was no gauge available on the volume of gas, but the shut in casing and tubing pressure was equalized at 1,530 pounds.

No. 1 Mitchell is an old well drilled in 1933 and was abandoned at a depth of 6,875 feet after several drill stem tests had showed oil and gas. The most favorable tests were made from 3,170-3,203 feet and from 6,279-6,442 feet. The latter test was made after 7-inch casing had been cemented at 6,279 feet and showed considerable distillate and fresh water.

The well is on a block of 5,500 acres and was recompleted in order that the fuel could be used in drilling a deep test. Other interests in the block are held by Shell Petroleum Corp. and J. R. Black.

Pickett Ridge

To the south in the Pickett Ridge field, Texas Co. has reached the pay in three of its wells and is preparing to test. No. 14-A Pierce in the I.&G.N. Survey No. 39 is bottomed at 4,709 feet and casing was perforated from 4,698-4,709 feet, preparatory to testing. No. 17-A Pierce in Survey No. 38 is bottomed at 4,709 feet and 7-inch casing was cemented at 4,697 feet. No. 18-A Pierce is bottomed in oil sand at 4,713 feet, and 7-inch casing was cemented at 4,703 feet.

Withers

Further south in the Withers field the same company is preparing to drill plug on No. 4-C Pierce in the J. Caldwell Survey. It is bottomed in oil sand at 5,560 feet and 7-inch casing was cemented at 5,551 feet. Same company's No. 5-C Pierce is coring in sand and lime below 5,529 feet, and should reach the sand within a few hours.

To the west, the company has encountered an encouraging showing in No. 1-B Pierce and it is drilling in shale and sand below 5,586 feet. Sand showing oil and gas was cored from 5,531-81 feet, the approximate level from which the sand is encountered at the Withers field. No. 1-B Pierce is the third wildcat to be drilled on the Pierce Estate and if productive will be the third strike by the company within 16 months.

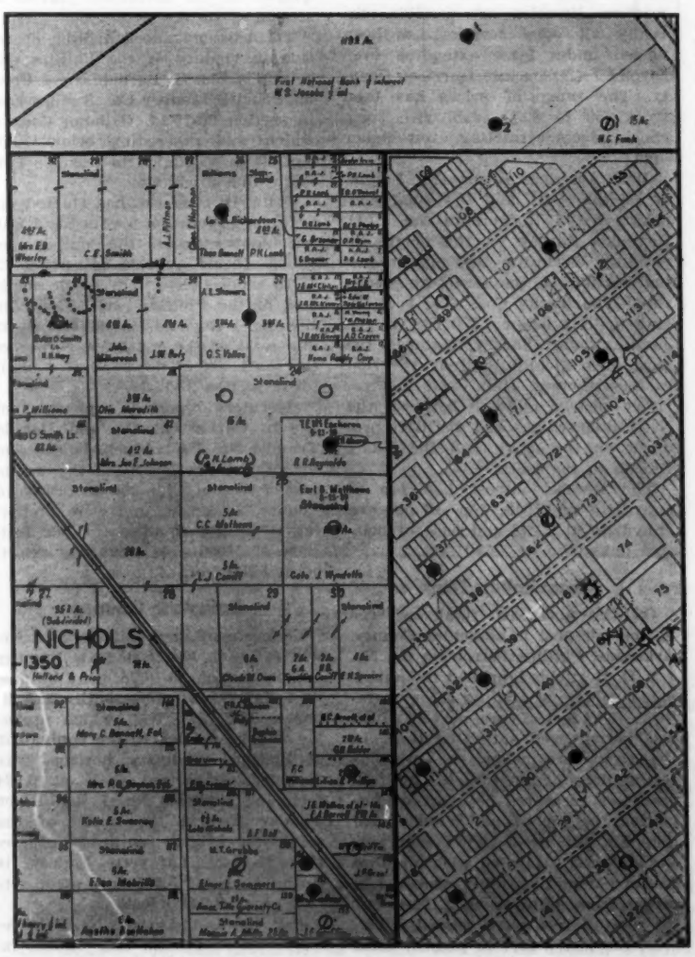
Hardin

At the Hardin field, Liberty County, preparations were being made by Atlantic Oil & Producing Co. and others to test a deep sand encountered in No. 1 Hardy 3,600 feet north of the discovery well in the J. Robeson Survey. Two weeks ago salt water was tested in the discovery horizon from 7,498-7,550 feet and the hole was deepened to 8,110 feet. Seven-inch casing has been cemented at 8,050 feet and a drill stem test will be made through perforations from 8,033-57 feet. Although the hole is bottomed approximately 400 feet lower than the discovery, it is believed in the same horizon or the Upper Saline Bayou. Location has been made by Jack Frazier and others for a second test. No. 1 George Rearles, 370 feet from the south and east line of a 112.5-acre tract in the Amos Green Survey.

Preparations are being made by Stanolind Oil & Gas Co. to flow No. 1 State and No. 2 Middleton with gas after they failed to flow when tested. No. 1 State cored sand showing oil and gas in a sidetracked hole from 6,612-6,616 feet and No. 2 Middleton cored oil and gas sand from 6,603-08 feet. Since the latter test was several feet higher than the other three wells, its failure to flow was a surprise. None of the completed wells has shown any strong gas pressures.

Cotton Lake

Prospects of Salt Dome Oil Co. and Gem Oil Co. No. 2 Lawrence encountering a deeper oil sand in the Frio horizon at the Cotton Lake Prospect, northern Chambers County, were not so bright at the close of the week as approximately 200 feet of this section has been encountered and has shown nothing but salt water sands. An electrical coring test showed the Frio to have been topped at 6,800 feet. Since production was found 400 feet below the top of this section at the Amelia field, the operators will probably explore this horizon until they are sure there is nothing of importance to be developed and the hole may be plugged back to the Marginulina around 6,600 feet where it was originally completed for an initial production of 20 bbls. per hour through a quarter-inch choke. A decline in production and the intrusion of salt water were the reasons for the well being deepened.



A portion of the South Houston field, Harris County, showing extensions and new development started to the west and northwest

(Map courtesy of W. W. Zingery, Houston, Tex.)

Amelia

Humble Oil & Refining Co. No. 1 Guinn, south of its No. 1 Langham, discovery well of the Amelia field, Jefferson County made a 15-minute drill stem test from 6,345-61 feet and recovered 1,350 feet of mud, cut with salt water and is being deepened to the discovery horizon. Discorbis was topped at 5,537 feet, Heterostegina 5,961 feet, Marginulina 6,060 feet and Frio at 6,166 feet. Based on the latter marker it is somewhat higher than the discovery. To the northwest, Glenn H. McCarthy No. 2 Longe which blew out and caught fire and started cratering last week, killed itself when the hole bridged. No new location has been made.

Magnolia Petroleum Co. No. 1 Funchess, several miles southwest of the Amelia field, Jefferson County, is drilling in shale below 6,800 feet. Marginulina was topped at 6,450-52 feet. McSpadden and others No. 1 Burrell Estate is a new location north of Lovells Lake and 995 feet from the west line of the survey and 500 feet north of a road running east and west. Material is being moved in.

Hardin County

Two wildcats in Hardin County have reached interesting depths. In the Kountze area, Jack Frazier and others No. 1-A Olive Sterneberg, in the John Houston Survey is drilling in shale below 5,900 feet. Heterostegina was topped at 3,390, Vicksburg 4,980, Warreni 5,130, Uvergina 5,430, Marginulina 5,714, Massalina Pratti 5,800-15 feet and the Hockleyensis at 5,860-75 feet. Elevation is 98 feet. Based on these markers it is reported to be about normal. On the Grigsby Prospect, D. B. McDaniel No. 1 Nona Mills is coring in shale below 5,425 feet. No markers are available at this writing. It is in the E. E. Manuel Survey.

Splendora

Another try for production at the Splendora area, Montgomery County will be made by Tide Water Oil Co. and Darby Petroleum Co. which are rigging up for No. 1 W. C. and Ella Corbett, 501 feet north of the south line and 652 feet east of the west

(Continued on Page 65)

North Louisiana, Arkansas

CASS COUNTY EXTENSION IS FEATURE OF RODESSA AREA

By H. S. NORMAN

SHREVEPORT, La., May 5.—The Rodessa pool of Caddo Parish, Louisiana, and Cass County, Texas, continued last week to set the pace for new production development in this territory. The pool added nine new oil wells, eight in Caddo Parish ranging in production from 130 bbls. per hour down to 17 bbls. per hour. The Cass County, Texas, side of the pool gained one new producer gauging 28 bbls. per hour through one-quarter inch tubing choke.

Two deep failures were abandoned in De Soto Parish both in salt water bearing horizons.

One of the Rodessa pool completions was an old well drilled 5 feet deeper to stimulate production. It remains a light well.

Estimated Production

Estimated daily gross production all companies week ending May 1, 1936:

NORTH LOUISIANA

Bellevue	425
Caddo Light	4,620
Caddo Heavy	2,430
Converse	1,115
Cotton Valley	420
De Soto and Red River	1,280
Elm Grove	425
Haynesville	3,410
Holly	140
Homer	2,650
Pleasant Hill	160
Rodessa	49,145
Sarepta-Carterville	495
Urania	2,895
Zwolle	1,230
Total	70,240

SOUTH ARKANSAS

Champagnolle	2,150
El Dorado	2,115
Lisbon	290
Miller County	1,625
Nevada	855
Smackover Light	2,165
Smackover Heavy	17,900
Stephens	570
Urbana	1,965
Total	30,075

Texas side Rodessa field 1,875 bbls. daily.

Cass County Extensions

Production of at least gas, probably some distillate and possibly some crude oil seemed established in American Liberty Oil Co. No. 1 Rambo, 4-mile southwestern extension to the Rodessa producing structure in Cass County. Although recovered cores contained no porous, oil saturated formation, the Dees and lower horizons carried good odor of gas and good odor and taste of distillate. Operators halted coring at 6,072 feet and set casing, after running Schlumberger. The detailed Schlumberger chart and casing point were withheld temporarily by operators, but it was believed pipe was cemented near the bottom and that gun perforating method of testing desired levels will be used.

American Liberty No. 1 Rambo, 300 feet south and east of the northwest corner of an 80.2-acre tract in the John Rives Survey, Cass County, is believed too near the fault to produce gusher type oil production and is compared by geologists to gassers too near the fault in the Rodessa pool proper.

With elevation of 265 feet, the No. 1 Rambo topped Dees at 5,949 and cored to 6,072 feet. A total of 16 feet of coquinal lime were recovered between 5,949 and 6,000 feet carrying good gas and distillate odor. From 6,000 to 6,020 feet, operators recovered feet of hard shale and streaks of hard sand. Calcareous sand and shale, black shale and hard dense lime were reported from 6,020 to the total depth.

Importance of the American Liberty's southwestern Rodessa extension rests chiefly on the fact that it apparently proves the structure productive that distance from nearest wells and lends credence to the theory that two other features may exist along the fault. That numerous companies subscribe to the theory that further extensions in a southwestern direction are possible, virtually all open acreage has been placed under lease extending even beyond Jefferson into Harrison County. The range of prices has been from $50 to $250 cash with some choice pieces attracting even higher bids.

With American Liberty No. 1 Rambo on the south and the same company's No. 1 Rodgers in the J. D. Reynolds Survey on the north apparently disclosing the gas producing portion of the structure southwest, The Texas Co.'s No. 1 E. E. Hall drilling below 2,500 feet in the James Young Survey becomes the most strategically located operation in Cass County. It is exploring territory nearly midway between the No. 1 Rodgers gas and distillate producer on the north and the No. 1 Rambo on the south.

The Rambo outpost had top of anhydrite at 5,019, top of massive anhydrite at 5,292 and base of massive anhydrite at 5,530 feet.

Smackover Test

On the northeast flank of the Smackover pool in Ouachita County, Arkansas, Phillips Petroleum Co. No. 1 J. D. Reynolds launched the anticipated volume of trading after operators cut 17 feet of core, part of which was porous well saturated lime. In the first core below the previous testing depth, from 4,900 to 4,915 feet, operators recovered 5½ feet of formation the top of which was hard lime, but the last 3 inches were porous and well saturated with oil. Two feet of porous lime were recovered in coring from 4,915 to 4,923 feet, but the next 3 feet were missed. However, the last 3 feet to present total depth of 4,926 feet cut as though soft.

At the previous depth of 4,900 feet, the well gauged 24,270,000 feet of gas daily through 2½-inch open tubing and 7 bbls. of 53-61 gravity distillate per hour. While testing tubing pressure was 250 and casing pressure 1,450 pounds. While preparing to pull tubing to deepen and while preparing to rerun tubing for a test at the lower total depth, the well threatened to blow out.

Lion Oil Refining Co. was prominent in last week's trading near the Phillips' well. The Lion Co. is credited with paying $20,000 cash and a like amount in production for the southeast quarter of the southwest quarter of section 27-15-15, a half mile south of the well. The company paid the same consideration in cash and $32,500 in production for the southeast quarter of the northeast quarter of section 28-15-15 and the south half of the southeast quarter of section 20-15-15. J. H. Alpin paid $6,500 cash and $7,000 in production for the north half of the southwest quarter of the southwest quarter of section 20-15-15.

The most advanced drilling operation in vicinity of the Phillips discovery is Ben G. Barnett No. 1 Freeman Smith Lumber Co., 8 miles east in section 36-15-14. Calhoun County, which was proceeding below 1,900 feet. It is scheduled to test for Permian lime production.

Delta Drilling Co. has started operations on location for its No. 1 Calion Lumber Co., in the southeast of the southeast quarter of section 22-15-15 which is less than a mile northeast of the Phillips' well. The Phillips No. 1 Reynolds is 330 feet north and west of the southeast corner of the southeast of the northwest quarter of section 27-15-15.

Operators reported a showing of gas in Carter Oil Co. and Donald Trumbo No. 1 Cradduck, in the center of the northwest of the northeast of section 3-11n-30w in Crawford County, Arkansas, and were preparing to set 8-inch pipe at 1,362 feet. Base of Mississippi lime was reported at 1,230 feet.

Lafayette County

Coring continued last week in Erwin & Leach No. 2 Bodcaw Lumber Co., in section 20-16-23, near Stamps in Lafayette County, southern Arkansas. The deep test, which probably will be carried to the equivalent of Phillips' producing horizon, was reported coring red shale at 6,824 feet. Joe Modisett No. 1 Red River Lumber Co., in the center of the southwest of the southwest of section 21-19-24, Lafayette County, is coring shale at 5,305 feet after setting pipe at 5,300 feet.

J. P. Evans and others No. 1 Crichton, Webster Parish, La., wildcat in section 35-18-9, north of Heflin, cored below 5,365 feet at end of the past week after logging the last stringer of anhydrite at 5,333-48 feet.

Some reports that the Evans test logged saturation are believed based on stain and odor of oil in lime and shale recovered in coring from 5,291-97 feet. The stain and odor is thought to have originated from oil used by operators in lubricating stuck drill pipe. In view of the later anhydrite stringer, this theory is partially confirmed. First producing horizon at Rodessa is found about 70 feet below the last anhydrite stringer.

Webster Parish

Ohio Oil Co. No. 1 R. L. Halloway, in section 23-21-10, Webster Parish, exploring for deep production in the old Cotton Lake area, is now the deepest test ever drilled in North Louisiana or southern Arkansas. Operators were last reported drilling red shale at 7,254 feet. Detailed information is being withheld by operators, but a few sales of royalty surrounding the operation were reported last week. The important United Gas Public Service Co. No. 1-A Murff, in section 17-17-11, Bossier Parish, halted drilling at the end of the week at 5,809 feet and operators prepared to set casing at an unannounced seat up the hole. The wildcat test had top of anhydrite at 3,585 feet and base of massive anhydrite at 4,084 feet, with elevation of 202 feet. The test is in an area surrounded by holdings of Standard, Gulf, Tide Water and Harrel & Hall, who probably purchased for one or two other major companies. East of Cross Lake, north of Greenwood and south of the old Caddo pool, Pyramid Oil & Gas Co. No. 1-A Wheeler, in section 16-18-16, Caddo Parish, is coring below 4,715 feet with base of massive anhydrite determined at 4,705 feet in dense lime. The test probably will reach the equivalent of the Rodessa producing horizon this week. Elevation of the wildcat test is 256 feet.

Between the Pyramid test and Shreveport, Gulf is reported contemplating a deep test on its block centering on sections 22 and 23-17-15, south of Cross Lake. It was also understood that Persian Oil Co. No. 1 J. E. Cupples, a new location announced last week, will explore to the Glenrose. Two deep tests proceeded last week in Claiborne Parish in the old Sugar Creek district. Triangle Drilling Co. (United Gas) No. 1 Kilpatrick, in section 7-19-5, showed 1,000,000 feet of gas and 500 feet of drilling mud in an hour drill stem test from 5,450-5,766 feet. The tested depth probably included the zone from which the United No. 2 Darrett, 10 miles north, opened a new deep horizon producing 20,000,000 feet of gas per day at 5,660 feet. No. 1 Kilpatrick is being reamed to bottom and will be deepened. United No. 2 Darrett, in section 21-20-5, be-

(Continued on Page 62)

Kansas Developments

WILDCATS IN BARTON, ELLIS COUNTIES STRIKE LIME PAY

By
DAL DALRYMPLE

Two Kansas wildcats were showing as probable pool openers, some big producers were completed and proven areas extended during the past seven-day period, a busy week in the oil fields of the Sunflower state. In Barton County, Simpson & Noble, C. M. Coats and Atlantic Oil Producing Co. No. 1 Hiss, C NW NE section 31-20-13w, wildcat 6 miles south of Great Bend, found oil pay in Lansing lime, total depth 3,287 feet. It swabbed 40 bbls. of oil in an eight-hour test and then was deepened to 3,290 feet in Siliceous lime, where it was being tested. In Ellis County, Lario Oil & Gas Co. and others No. 1 Walter, SE NE SW section 2-12-18w, wildcat 12 miles northeast of Hays and west of the Shutts area, topped Topeka lime at 3,060 feet, drilled to total depth of 3,165 feet and the hole filled up with 2,900 feet of oil in 16 hours. It had not been tested. The oil tested 40 2 gravity.

The Raymond pool in southwestern Rice County was extended to the east by Sinclair Prairie Oil Co. No. 1 Kelly, NW SE section 22-20-10w, when it found pay in Siliceous lime at 3,395-97 feet, total depth. Oil rose 2,500 feet in the hole, but it had not been tested. It was to be deepened. The Texas Co. retested its No. 1 Moran, SE SE NW, section 27-17-11w, north offset to the discovery well in the Bloomer field of Barton County and second producer in the pool, making potential of 1,764 bbls. of oil natural from Siliceous lime at 3,285 feet, total depth. It is about four times as big as the discovery well.

Estimated Production

Estimated daily average production in Kansas for the week ending May 2 and for the preceding week is as follows:

	Barrels	
	May 2	Apr. 25
Oxford City	7,575	7,750
Burrton	13,675	13,500
Ritz-Canton	6,675	6,725
Hollow-Nikkel	4,600	4,550
Voshell	3,300	3,275
Ellsworth County:		
Lorraine-So. Lorraine	8,675	8,594
Other pools	1,477	1,544
Rice-Barton Counties:		
Chase	10,375	10,625
Raymond	3,396	4,065
Silica	10,775	10,724
Kessling	2,632	3,064
Miscellaneous Rice	3,808	4,200
Miscellaneous Barton	2,324	2,032
Russell County:		
Fairport	3,138	2,620
Gorham	5,374	4,672
Russell	4,060	3,150
Other pools	12,400	11,859
Sedgwick County:		
Valley Center	1,400	1,370
Greenwich	1,422	1,404
Robbins	1,458	1,480
Eastborough	846	824
Other pools	501	476
Ellis County	1,714	1,368
Kingman County	573	550
Stafford County	2,525	1,698
Greenwood County	9,250	8,750
Butler County	18,240	17,990
Other fields	22,758	20,196
Total Kansas	162,625	159,075

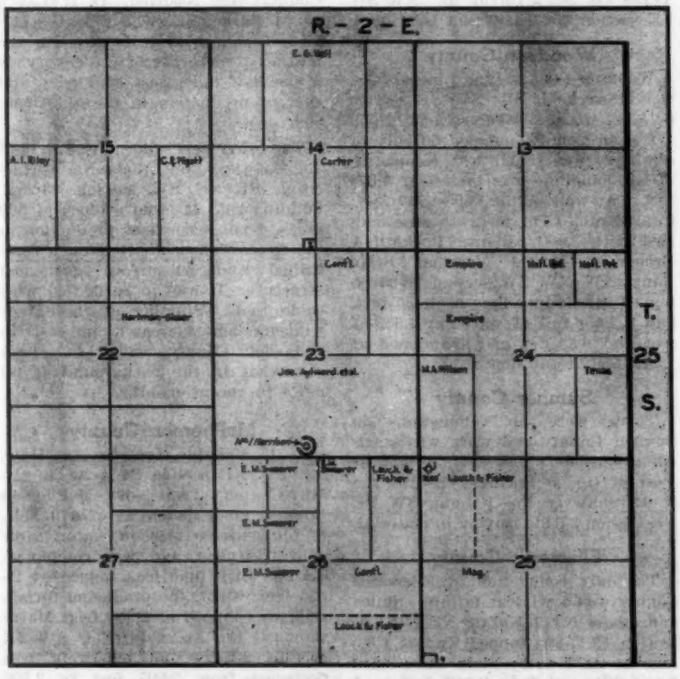
Reno County

The biggest producer completed the past week in Reno County was the Magnolia Petroleum Co. No. 1 Mayme Harris, NE NE NW section 9-26-4w, in the Hilger area. After acidizing with 1,000 gallons, it made 24-hour potential of 1,488 bbls., producing from Viola lime at 4,113-18 feet, total depth. Top of Chat was 3,668 feet; Misener, 4,079 feet.

In the Burrton sector, Marathon Oil Co. No. 1 Priddle, Account 2, made potential of 1,228 bbls. of oil, with 2,300,000 feet of gas and was completed. Chat was topped at 3,295 feet; total depth 3,368 feet. After acidizing with 2,000 gallons, it flowed 825 bbls. in 15 hours. Texas Co. No. 4 Collins, NW NW SE section 17-24-4w, topped Chat at 3,296 feet and was bottomed at 3,365 feet. It made potential of 155 bbls. before acid treatment, and 419 bbls. after acid treatment. Sinclair Prairie Oil Co. No. 2 Regier, C NW SE section 24-23-4w, had top of Chat at 3,257 feet; total depth, 3,364 feet. After acidizing with 2,000 gallons, it flowed 370 bbls. of oil in 21 hours, and made potential of 444 bbls.

A Reno County wildcat failed to find commercial production. It was the McPherson Drilling Co. and others No. 1 Miller, SE SE NE section 23-24-5w, dry and abandoned in Siliceous lime at 3,917-75 feet, total depth. Tops follow: Kansas City lime, 2,650 feet; Chat, 3,365 feet; Misener, 3,718 feet; Hunton, 3,725 feet; Viola, 3,808 feet; Wilcox sand, corrected, 3,829 feet. It had a hole full of water at 3,835-41 feet.

New work in Reno County included the following: Olson Drilling Co. and Shell Petroleum Corp. No. 3 Sabin "B," C SW SE section 13-23-4w, location; same operators No. 4 Sabin "B," C SE SW section 13-23-4w, location; Deal Oil & Gas Co. and others No. 5 McElwain, NW SE SE section 34-23-4w, rigging up rotary; Sinclair Prairie Oil Co. No. 3 Matlock, SW NE SW section 3-24-4w, rotary rig; Shell Petroleum Corp. No. 1 Mardis, C SW NW section 10-24-4w, old well, rigging up to drill deeper; Texas Co. No. 6 Collins, C S half N half NW section 16-24-4w, building rotary rig; McPherson Drilling Co. and Derby Oil Co. No. 3 Scheuchzer, SE SE SW section 17-24-4w, cellar, and Magnolia Petroleum Co. No. 2 Clyde Harris, NW NE SW section 9-26-4w, building rotary rig.



Joe Aylward and others are starting a wildcat test at No. 1 Harrison, SE SW section 23-25-2e, Sedgwick County, Kansas

(Mid-Continent Map Co., Wichita, Kans.)

Russell County

Operations in Russell County were chiefly at routine stages, only two wells being completed during the week. Central Petroleum Co. No. 3 Witt, SW SE SE section 3-14-15w, made potential of 1,666 bbls. of oil from Gorham sand at 3,280-83 feet, total depth. Oswald lime was topped at 3,032 feet.

Texas Co. No. 2 Holland, C E half NW SW section 13-14-15w, made potential of 523 bbls. of oil, cutting 10 per cent water, in 19 hours. Top of Anhydrite was 875 feet; Siliceous lime, the producing formation, 3,244 feet; total depth, 3,271 feet. It was treated with 1,000 gallons of acid.

Six new operations were reported in Russell County, as follows: Empire Oil & Refining Co. No. 1 Mai "B," SE SE SW section 28-13-14w, location; same operator No. 5 Crawford, SW NW SW section 2-14-15w, location; Central Petroleum Co. No. 5 Witt, NE SE SE section 3-14-15w, location; same operator No. 6 Witt, NE SW SE section 3-14-15w, location; Witt No. 2 Witt, SW NW SE section 3-14-15w, moving in material; Lario Oil & Gas Co. and others No. 1 Steinert, NW NW SW section 21-15-15w, location.

Bridgeport Machine Co. No. 4 Witt, NE SW section 3-14-15w, in the Gorham district of western Russell County, flowed 2,388 bbls. of oil when tested the past week, but had not been completed. Topeka lime was topped at 2,765 feet; total depth, 2,872 feet. It was the belief of some observers that the oil was coming through a fissure from Lansing lime or other lower producing zone.

Rice County

Two good producers were completed in the Rice County sector of the Silica pool. C. B. Davis and others No. 8 Dueser, NW SW SW section 31-19-10w, topped Siliceous lime at 3,258 feet and was bottomed at 3,278 feet. It produced 518 bbls. in 24 hours; was acidized with 2,000 gallons and made potential of 1,148 bbls. Gulf Oil Corp. No. 7 F. E. Steckel, SW cor. section 30-19-10w, made potential of 741 bbls. of oil after plugging back from total depth of 3,315 feet to 3,310 feet and acidizing. Siliceous lime was topped at 3,284 feet and at total depth it swabbed 120 bbls. of oil and 10 bbls. of water in 24 hours. Before deepening, it had made potential of 436 bbls. at 3,310 feet.

In the Geneseo district, Continental Oil Co. and others No. 1 Root, NW NE NE section 36-18-8w, was completed with potential of 579 bbls. of oil. It was producing from Wilcox sand at 3,154-81 feet, total depth. Kansas City lime was topped at 2,795 feet.

New work in Rice County: Continental Oil Co. and Empire Oil & Refining Co. No. 2 Nickel, SE NW SW section 13-18-8w, location; Continental Oil Co. and others No. 2 S. Ainsworth, NW NW NE section 25-18-8w, building rig; same operators No. 1 J. Jones, NE NW NE section 36-18-8w, location; Shell Petroleum Corp. and others No. 1 Sherman "B," SW SW NE section 16-19-9w, building rotary rig; Skelly Oil Co. No. 2

Sharpe, SW NW NW section 8-20-9w, moving in material.

Barton County

Four producers were completed in the Barton County sector of the Silica pool. The largest of these was the Continental Oil Co. No. 9 Risse, C E half NW SE section 36-19-11w. It topped Siliceous lime at 3,269 feet, was bottomed at 3,284 feet, and after acidizing with 4,000 gallons made potential of 1,558 bbls. of oil. Magnolia Petroleum Co. No. 3 Meda Steckel, SE NE NW section 1-20-11w, made potential of 1,475 bbls. It had Siliceous lime at 3,274 feet; total depth 3,288 feet.

Gulf Oil Corp. No. 6 F. J. Wendel, C W half SE NE section 36-19-11w, topped Siliceous lime at 3,276 feet; total depth, 3,287 feet. It then made potential of 1,003 bbls. of oil, and after acidizing with 1,000 gallons made new potential of 1,157 bbls. Phillips Petroleum Co. No. 3 Matzek, SE NW NE section 36-19-11w, topped Siliceous lime at 3,305 feet; total depth, 3,322 feet. It made potential of 123 bbls. of oil, with 27 bbls. of water. It was treated with 1,000 gallons of acid, pumped 134 bbls. of oil and 113 bbls. of water in 14 hours, and made potential of 90 bbls. of oil, with 259 bbls. of water.

The following new work in Barton County was reported: Texas Co. No. 2 Moran, NE SE SW section 25-17-11w, location; Rose Spring Drilling Co. and others No. 1 Rick, SW cor. section 1-19-11w, cellar; Mid-Continent Petroleum Corp. No. 5 Schmidt, NW SE SW section 36-19-11w, moving in material; Magnolia Petroleum Co. No. 5 Meda Steckel, SW NE NW section 1-20-11w, rotary rig.

Trego County

Continental Oil Co. No. 1 Holcomb, C E half E half NW section 26-11-23w, wildcat in northern Trego County, one of the important discoveries of the year in Kansas, was completed with a potential of 616 bbls. of oil. It was producing from Oswald lime, topped at 3,602 feet, corrected, with pay at 3,647-54 feet, total depth. It was treated with 4,000 gallons of acid. Other tops were: Anhydrite, 1,808 feet; Fort Riley, 2,445 feet; Topeka, 3,210 feet.

Ellis County

A. H. Gibson and others No. 3 Ruder, NW SW SE section 8-15-18w, in the Ruder area of Ellis County, was completed. It topped Oswald lime at 3,286 feet; had pay at 3,307-09 feet, and was bottomed at 3,335 feet. After acidizing with 3,000 gallons, it made potential of 431 bbls. of oil, with 53 bbls. of water.

New work in Ellis County was as follows: Margay No. 2 Bemis "A," NE SE SE section 16-11-17w, building rig; Tom Palmer and Storm King Oil Co. No. 1 Madden, NW NW SW section 9-15-18w, moving in material; D. R. Lauck and others No. 1 Snider, SW SW NE section 3-21-11w, rig.

Harvey County

Marathon Oil Co. completed a gas well in Harvey County. It was the No. 1 Hegge, NW SW SW section 13-22-2w, which produced 24,500,000 feet of gas at total depth of 2,957 feet. Kansas City lime was topped at 2,311 feet; Chat, the producing horizon, at 2,912 feet.

The only other Harvey County completion was an old well deepened from 3,464 feet. It was the W. C. McBride No. 4 Schmidt, NE cor. section 30-22-3w, in the Hollow-Nikkel area. Viola lime was topped at 3,580 feet; Wilcox sand, 3,600 feet. It was dry and abandoned at 3,635 feet, total depth. It had a small show of oil, but water was prevalent.

Cowley County

Penwest Oil Co. No. 1 Clover, NE SE SE secion 8-31-7, wildcat, northwest of the Brown pool in northeastern Cowley County, produced 8,000,000 feet of gas and was completed. Top of Mississippi lime was 2,765 feet; base, 3,115 feet; Siliceous lime, 3,177 feet; total depth, 3,182 feet; plugged back to 1,460 feet to complete after water was encountered in the lower levels.

Trees Oil Co. No. 4 Houser, C S half N half SE section 19-30-4, in the Trees area, failed to find sand and was dry and abandoned at 2,905 feet, total depth. Kansas City lime was topped at 2,315 feet. Gralapp & Loony No. 1 Rockwell, SE SE NE section 13-32-4, was dry and abandoned in Mississippi lime at 3,075-77 feet, total depth. Kansas City lime was topped at 2,510 feet. Showings of oil were reported at 2,355-65 feet and at 2,415 feet.

Two new tests in Cowley County were reported. W. M. McKnabb No. 1 Community, C NE NW section 14-34-3, was a rig. Roth & Faurot and Texas Co. No. 2 David "B," NW SW SE section 35-30-4, was a location.

Woodson County

Woodson County Pipe Line Co. No. 6 Winterscheid, SW NW SE section 6-24-14, in the Winterscheid field, Woodson County, pumped 60 bbls. of oil in 24 hours and was completed. Mississippi lime was topped at 1,674 feet; pay was had at 1,695-1,710 feet; total depth, 1,714 feet. It was acidized with 3,000 gallons. Rockhill & Brookover No. 1 Vermont State Bank, NW NW SW section 26-25-14, topped Mississippi lime at 1,535 feet, had a hole full of water at 1,555-57 feet and was dry and abandoned at 1,562 feet, total depth.

Sumner County

There were no completions in Sumner County and work was started at only one new test, a wildcat west of Geuda Springs. It was the E. B. Shawver No. 1 Judd, SW SE NE section 3-34-2, moving in material.

Ellsworth County

The only completion in Ellsworth County was a wildcat failure. Skiles and others No. 1 Kafka, NE NE SW section 15-17-8w, topped Kansas City lime at 2,835 feet; Viola lime, 3,240 feet; Siliceous lime 3,319 feet, and it had a hole full of water and was dry and abandoned at 3,327 feet, total depth.

Greenwood County

N. C. Dunn No. 1 Dawson, C NW NE section 27-26-13, wildcat in Greenwood County, was dry and abandoned after drilling to 1,527 feet, total depth, and plugging back to 1,200 feet when water intruded. Shooting with 40 quarts failed to get results. Peru sand was topped at 1,190 feet; lime, 1,505 feet.

One new operation in Greenwood County was reported. Wenzel and others No. 2 Cross, NW SE NE section 12-27-10, had spudded.

Butler County

El Dorado Refining Co. No. 2 McCraner, NE SW NW section 1-25-3, in the Potwin area of Butler County, was dry and abandoned in Mississippi lime at 2,708-33 feet, total depth. It had a slight showing of oil in lime.

New work in Butler County was as follows: Phillips Petroleum Co. No. 16 Scully, NW NW SE section 17-23-4, moving in machine; McGinnis and others No. 1 Hinnen, NE NE SW section 18-24-4, rigging up machine; El Dorado Refining Co. No. 3 Huston, NE SE NW section 1-25-3, moving in material; General Petroleum Co. No. 1-A Heerman, SW cor. section 20-26-3, an old well, rigging up to drill deeper; Dalton and others No. 1 Miley, C SW NE section 17-27-5, wildcat, machine.

Rooks County

Three new operations, including two wildcats, were reported in Rooks County. L. C. D. Drilling Co. and others No. 1 Westhusin, C NE SE section 11-9-17w, wildcat southeast of the Dopita pool, was building rig. Trees Oil Co. No. 1 Minx, SW cor. section 31-10-18w, wildcat in the southern part of the county and east of the Zurich pool, was a location. Sunray Oil Co. No. 1 Senecal, SE SE SW section 26-10-19w, in the Zurich area, was a location.

Sedgwick County

Two new wildcat tests in Sedgwick County were reported. D. R. Lauck No. 1 Parke, SE SE NE section 17-25-2, was a wildcat location in the northeastern corner of the county. It is one-half mile west of Furley and east of production in the old Goodrich pool.

The other new wildcat was that of Joe Aylward and others No. 1 Harrison, SE SE SW section 23-25-2, building rig. It is on a block of 800 acres, 4 miles north of production in the Greenwich pool. It is on a core-drilled and subsurface geological structure. It was to be drilled with cable tools. Starting of these new wildcats has increased interest in Sedgwick County, which has been somewhat in the background of oil news in recent months.

McPherson County

W. C. McBride, Inc., No. 1-A Hale, NE SW NE section 24-19-2w, in the Ritz-Canton field of McPherson County, made potential of 170 bbls. of oil, with 35 bbls. of water, after acid treatment and was completed. Kansas City lime was topped at 2,325 feet. Chat, the producing formation, was topped at 2,930 feet. Marathon Oil Co. No. 1 Pitts, C SW SE section 2-19-2w, an old well, was deepened from 2,995 feet to 3,525 feet, total depth, where it had a hole full of water, and was dry and abandoned. Siliceous lime was topped at 3,521 feet.

New work in McPherson County follows: T. C. Johnson and others No. 1 A. R. Johnson, SW SW NW section 33-17-1w, a communitized wildcat south of Roxbury in the northeastern corner of the county, was building rig. Bennett & Aikman and others No. 1 Sellers, NW NW NE section 31-19-1w, was building rig.

Barber County

The following five new operations were reported in Barber County: Barbara Oil Co. No. 1 E. F. Magnison, C SE SW section 11-33-13w, location; same operator No. 1 Magnison, C NE NW section 14-33-13w, location; same operator No. 3 Lytle, C SW SE section 11-33-13w, rigging up rotary; the company's No. 1 Angell, C NE NE section 23-33-13w, an old well being deepened, drilling at 4,932 feet; the No. 2 Angell, C SE NW section 23-33-13, location.

Kingman County

Oklahoma Oil Corp. and others No. 1 Reeves, NW cor. section 29-27-5w, a wildcat, was a location in northeastern Kingman County. It was the only new operation reported in the county.

Rush County

There were no completions and only one new test in Rush County. Morgan & Flynn No. 1 Koril, NW NW SW section 23-18-16w, had dug cellar.

California Fields

(Continued from Page 54)

pletion listed in the Long Beach field this week was good for 42 bbls. of 27.2 gravity oil per day from 5,700 feet after the hole had been plugged back from 5,925 feet.

Ventura Avenue

The Shell Oil Co. recompleted its No. 69 Taylor in the Ventura Avenue field after redrilling and deepening the hole to 7,525 feet and returned it to production flowing 2,660 bbls. of 30.6 gravity oil per day. This well is flowing through open line and shows a pressure of 1,020 pounds. Gas production approximates 2,470,000 feet per day. In the Rincon field of Ventura County, the Chanslor Canfield Midway Oil Co. recompleted No. 12-B and returned it to production flowing 1,041 bbls. of clean 30.1 gravity oil per day. This well was redrilled and deepened from 3,625 feet to 4,400 feet and this 775 feet of additional hole changed a 100-bbl. pumper into a flowing well making almost 10 times the settled production in the upper horizon.

Drilling Contractors

(Continued from Page 55)

tion in the Stanolind Oil & Gas Co. No. 3 Farmers Bank wildcat in Duval County, the rig was moved to the same company's No. 4 location in the Labbe field, east of the Seven Sisters field.

Trinity Drillers, Inc., of San Antonio are drilling in Wharton, Victoria, Zapata, Webb and Duval Counties of Southwest and Gulf Coast Texas. In Webb County they are completing a producer for the Superior Oil Co. in the Lopez field. In Duval County the wildcat test being drilled for the Kepley Production Co. was getting another attempt at completion. The test was revived after a planned abandonment when a Schlumberger test showed indications of production. The test is swabbing at 3,410 feet, total depth. Trinity will move in on Continental Oil Co. No. 9-A Sevier in the Driscoll field of Duval County shortly.

The Loma Oil Co. is drilling one wildcat in Zapata County for the Oklahoma Co. below 1,550 feet and is moving in on two other locations in McMullen and Live Oak Counties. The tests will be drilled for V. G. Schimmel in the Loma Alta field of McMullen County, and for the Windsor Oil Co. on the Stolte lease in Live Oak County.

West and North Texas

EXTENSION TO KERMIT AREA; GRAHAM WILDCAT DISCOVERY

By L. E. BREDBERG

FORT WORTH, Tex., May 4.—Features in the Permian Basin, West Texas, this week, were extensions in the Kermit area, Winkler County, and a 1½-mile northwest extension to the Foster or Odessa pool in Ector County. Another location for a wildcat in Yoakum County also created interest.

The east Concho County wildcat of the Maverick Oil Co. on the Jim Rice lands, section 18, I.N.R.R. Survey, has made a small producer after shooting with 15 quarts from 1,828-57 feet. This test was carried to 2,454 feet, but plugged back to 1,850 feet to shoot the saturated streak logged a couple of months ago. Five and three-sixteenths inch casing was set at 1,851 feet with bottom 36 feet perforated. After shooting the well flowed about 7 bbls. per day, swabbing from 18 to 20 bbls. on April 27, showing 10 per cent water and 250,000 feet of gas. It will probably be placed on the pump, but its caliber lends small encouragement to drilling, although it may be considered located on the flank of the structure with possibilities of greater production found elsewhere on the structure.

Foster-Odessa

The recently opened Foster or Odessa pool, about 3 miles north and a little west of Odessa, county seat of Ector County, was extended a mile and a half northwest when Stanolind Oil & Gas Co. No. 1-B Cowden, NE cor. of section 14, Block 43, Township 2s, T.&P. Survey, filled with 2,000 feet of oil while drilling at 4,055 feet, topping pay at 4,028 feet. The lime formation is showing for better porosity than the wells southeast, the oil coming from higher in the lime. It is 3 miles south of a wildcat drilled by Landreth Production Co. in section 47, and may help connect this wildcat with the Foster pool.

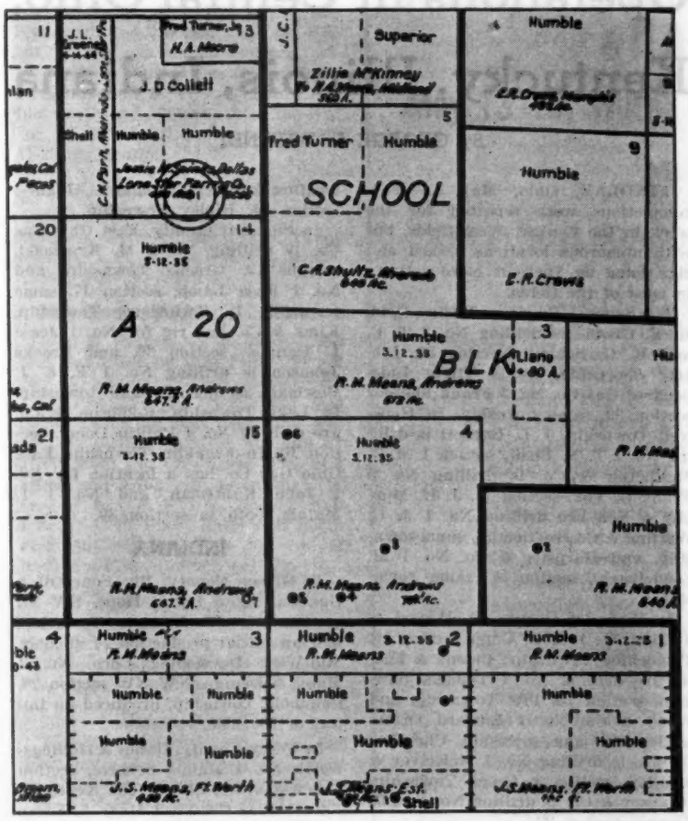
Winkler Extensions

Two extensions were made to the Kermit area in Winkler County. Illinois Oil Co., headed by John Herschback of Dallas, is completing a producer a mile northwest of production in the Kermit area, and between that area and the Sayre-Howe pool to the north. It was shut down at 3,114 feet in lime, making an estimated 4 to 6 bbls. per hour, scheduled to make a production test. It will probably be completed this week with offset locations staked for immediate drilling. It was given a 540-quart shot from 2,840-3,110 feet to break up the sandy lime.

Another extension was made by McCurdy and McCurdy in the SW cor. of section 16, Block B-3. This extends the Kermit producing area about one-half mile east, on a farm out of lease of Pure Oil Co. on the McCutchen lands. It topped pay at 2,825 feet, striking an increase in pay at 2,940-70 feet. Total depth is 2,980 feet, where it is to be shot. It is estimated good for 20 bbls. per hour as it now stands, making 2,000,000 feet of gas.

Andrews Outpost

Last week's 1½-mile northwest extension to the Means pool in Andrews County. Humble Oil & Refining Co. No. 1 Spinks, SE quarter section 13, Block A-20, P.S.L. Survey, flowed 305 bbls. in 24 hours on gas lift after receiving a dose of 4,000 gallons of acid, and is to be placed on the pump. It had previously been shot with 420 quarts from 4,440-4,550 feet.



Map showing Humble Oil & Refining Co. No. 1 Spinks, which extended Means Pool, Andrews County, nearly 1½ miles northwest

(Map courtesy Zingery Oil Map Co.)

Yoakum Location

Dunnigan Brothers of Breckenridge have contract to drill an extreme wildcat in section 367, Block D, J. H. Gibson Survey, Yoakum County. Bahan and Rhodes of Abilene hold the block, which is about half way between the Bennett discovery in section 678, same block, about 12 miles southeast, and the Roosevelt and Stogner location in section 215, same block, northwest. Contract calls for a 5,000-foot hole. The Bennett discovery is producing from plugged back depth of 5,264 feet.

Texas Seminole Hearing

The Seminole pool in Gaines County, which has but one gasser, shut in since completing, is to be discussed on May 11 by the Railroad Commission. Special rules are to be considered although no other tests are scheduled around the wildcat in section 228, Block G, W.T.R.R. Survey, 3 miles northeast of Seminole, county seat. Total depth is 4,910 feet. It tested 12,000,000 feet of gas daily.

Locations

Out of 44 locations staked in West Texas, four were for wildcats, or semiwildcats, Glasscock, Jones, Ward and Yoakum Counties one each.

Only 16 tests were completed, all producers.

Possible Pool Opener in Jones

Danciger Oil & Refining Co. No. 1 T. J. White, about 4 miles northwest of Nugent and southwest of the Sandy Ridge pool in eastern Jones County, is showing for a possible pool opener in the King sand logged at 2,268-71 feet. It previously bailed 1 bbl. of fluid per hour, half oil, and is being tested. The oil tested 41.3 degrees. It is 1,740 feet south of a wildcat abandoned last year, which had some saturated King sand.

Ranger and Wichita Falls

A rank wildcat discovery 2 miles southwest of Graham was the feature in the Wichita Falls (North Central Texas) district when it opened another producing area on the W. S. Simms lands in the D. Franklin Survey, 2½ miles north of production on the W. H. Wadley lands in the Coffman Survey. That production is coming from the 4,200-foot lime horizon whereas production in this new strike is found at 3,817 feet in the saturated lime. It flowed 400 bbls. high gravity oil through three-eighths inch choke after acidation, opening a new lime horizon. Nash and Windfohr of Graham, owners, will start a drilling campaign in the area.

A failure was chalked up for a wildcat 6 miles northeast of Nocona in Montague County, when L. C. Heydrick and others No. 1 J. C. Lawrence, Mary Burnsides Survey, missed all sands and was abandoned at 2,624 feet.

Texas Co. is preparing to drill a 4,000-foot wildcat on lands of Mrs. R. A. Stevens, NE quarter of section 1,985, T.E.&L. Survey, about 2 miles northeast of the Knox pool in section 3,412, same survey, which is about 5 miles northeast of Graham, in Young County.

A failure for Young County was abandoned by A. T. Strong and associates on the B. F. Manley farm, in section 2,728, T.E.&L. Survey, north of production in section 2,727, same survey. Total depth was 3,331 feet.

Cato Oil Co. No. 4-B G. B. Hamilton, stands to link the Hamilton and Benson pools with production as it has a hole full of oil from sand logged at 952 feet. It is in section 1,393, T.E.&L. Survey, a half mile west of production from east and west, in Young County.

Cooke County Activities

The Gainesville area in Cooke County, which recently saw the opening of another pool, 3 miles east of the city, saw abandonment of L. A. Long and others No. 1 Sarles, section 23, Hunt County School Lands, southwest of the town. It was given up at a total depth of 2,359 feet. Production east of Gainesville is coming from sand logged around 2,000 feet, and the shallow pool 2½ miles southeast of town is coming from sand around 1,660 feet.

The wildcat strike of Anderson and

Kerr, 3 miles east of Gainesville, Cooke County, on the F. H. Bruhlemeyer lands in the Hiram Stroud Survey, was completed for a better well than anticipated when the sand was logged two or three weeks ago at 2,009-14 feet. It gauged 790 bbls., flowing, in 24 hours, the oil testing 42.7 gravity, causing major companies to take an interest. Other tests are being drilled, the owners having worked out a drilling campaign on their block surrounding the discovery.

Cooke and Young Counties are the most active areas in the North Central Texas district, recent deep strikes around Graham and South Bend causing many tests, whereas shallower strikes in Cooke, especially around Gainesville, has pepped up activities.

Another wildcat for Cooke County is to be drilled by Manning and Moore on lands of Scottish American Mortgage Co., Isaac Walters Survey. It is to be drilled to 2,500 feet, and is located on both geophysical and geological structures, between Aubrey and Pilot Point.

Sunray Oil Co. and others No. 1 A. C. McCall, in the extreme northern part of Cooke County, in Warran's Bend, which has been shut down, is to be carried to 6,000 feet. It logged a sand from 4,606-30 feet, but it proved barren.

W. E. Halbert is to drill a 3,000-foot test on a block about 8 miles east of Nocona and approximately 4 miles from production in the Nocona pool in Montague County.

Panhandle District

There were 24 locations staked in the Panhandle district, all field tests, and six wells completed, the fewest completions in months.

The Railroad Commission is to hold a hearing at Amarillo on May 11, principally to discuss the gas-oil ratio and the present method of determining water exemption. New bradenhead tests to be made on Moore County wells will also be discussed.

PANHANDLE COMPLETIONS

Hutchinson County

J. E. Crosbie No. 11 Pitts, 2,950-3,040 feet, 598 bbls. pumping, shot with 600 quarts. Gulf Oil Corp. No. 5-D Whittenberg "B," 2,973-3,054 feet, 258 bbls. pumping, shot with 400 quarts. Texas Co. No. 6 Pond, 2,900-3,058 feet, 732 bbls. pumping, shot with 500 quarts.

Moore County

Sunray Oil Co. No. 1 Jones, 3,397-3,432 feet, 189 bbls. of oil and 48 bbls. of water pumping, acidized with 3,000 gallons.

Wheeler County

Barnett and others No. 2 Pryor, 2,232-2,239 feet, 25 bbls. pumping. Skelly Oil Co. No. 17 Johnson, 2,430-2,540 feet, 1,535 bbls. flowing.

WEST TEXAS COMPLETIONS

Ector County

Stanolind Oil & Gas Co. No. 1 J. E. Witcher, gas pay 4,100 feet, oil pay 4,100 feet, total depth 4,230 feet, plugged back to 4,211 feet, shot, elevation 2,937 feet, 100 bbls.

Glasscock County

Continental Oil Co. No. 4-8 Settles, 1,228-1,232 feet, 402 bbls. per day on pump.

Howard County

W. E. Production Co. No. 1-E Schrivner, 2,325-2,366 feet, 11 bbls. per hour on pump. Murray No. 4 Davis heirs, 2,450-2,817 feet, shot, 1,214 bbls.

Jones County

Ungren and Frazier No. 4 Dorsey, 2,222-2,224 feet, 84 bbls. in 45 minutes.

Pecos County

San Wan Oil Co. No. 1 Shearer, 1,365-1,487 feet, shot twice, 27 bbls. Stanolind Oil & Gas Co. No. 17-B Tippett, 359-399 feet, 15 bbls. Cardinal Oil Co. No. 7 Smith, 456-529 feet, 12 bbls. oil and 11 bbls. water; No. 1 State Lease 19,097, 1,250-1,333 feet, 17 bbls. per hour; No. 1 State Lease 19,008, 1,140-1,286 feet, 522 bbls. per hour.

Ward County

Hill and others No. 2 Clements, 2,260-2,375 feet, shot, 185 bbls. Black & Sons No. 3 Gordon, 2,445-2,536 feet, shot, 1,206 bbls. Richardson Oils, Inc., 31-B Johnson, 2,362-2,580 feet, shot, 1,103 bbls.

Winkler County

Continental Oil Co. No. 1 Walton, 3,275-3,410 feet, shot, 412 bbls. Gulf Oil Corp. No. 12 Keystone, 3,380-3,515 feet, shot, 830 bbls. oil and 116 bbls. water. Sayre Oil Co. No. 7-B Howe, 2,835-2,990 feet, shot, 1,154 bbls. oil and 55 bbls. water.

Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, May 4.—Few completions were reported for the week in the Central West fields, but with numerous locations staked and rigs going up, there is more activity in most of the fields.

In Seneca County, Tiffin field, R. E. Greene is drilling No. 3 T. C. and B. G. Schaull, section 30, Liberty Township, as is Tiffin Independent Gas Co. No. 3 Frank Sherger section 32, same township. In Hopewell Township, J. L. Barnett is drilling No. 1 T. N. Ensil, section 1. M. R. McPheron & Co. is drilling No. 5 Frank G. Fox, section 11. J. H. Murphy & Son are drilling No. 1 J. G. Werling & Co., section 16, same township, and Harpster & Co. No. 1 M. Sendelback, section 4, same township.

In Wyandot County, O. Weigal is drilling No. 1 Irene Cupp, section 16, Tymochtee Township; Cessna & Feasel are drilling No. 1 Thomas Bowman, section 15, Pitt Township, and Wood & Co. No. 1 Edward Orton, section 22, same township. Cherokee Oil Co. is drilling No. 1 McKelvey & Smalley, section 3, Crane Township. Dempsey & Co. is drilling No. 1 S. P. Cooper, section 22.

In Richland County, Ohio Fuel Gas Co. No. 2 W. C. Harris, section 25, Worthington Township, is a gas well at 2,789 feet. Same company made a location for No. 1 Mansfield Building & Loan Co., section 5.

In Tuscarawas County, Capital Drilling Co. No. 6 Stewart Asher is a gas well at 3,733 feet.

In Holmes County, Dave Shaffer No. 5 C. G. Jarvis, section 15, Monroe Township, produced an initial of 18 bbls. at 3,536 feet. Ohio Fuel Gas Co. No. 1 L. P. Pyers, section 18, is dry at 3,434 feet, and its No. 1 Hannah Tidball, section 19, produced 12 bbls. Same company is drilling on the William Craig, Lot 9, Mechanic Township. Ohio Fuel Gas Co. is drilling No. 1 Phillip Mizer, section 26, Paint Township, and has location for No. 1 Moses S. Miller, section 29, same township. Same company has a location for No. 1 Thomas L. Hughes, section 34, Ripley Township.

In Summitt County, East Ohio Gas Co. is drilling No. 1 M. Krasinski, section 19, Greene Township, and No. 1 Rosa Lamb, section 17, same township. In Twinsburg Township, Kime & Co. has rig for No. 1 Jesse L. Cannon, section 36, and Brooks Johnson is drilling No. 1 F. & J. Bowman, section 17, same township. In Lake Township, Robinson & Co. are drilling No. 4 Phillip Doerr, section 16. In Franklin Township, East Ohio Gas Co. has a location for No. 1 John Kauffman, and No. 1 I. Mathia, both in section 36.

INDIANA

In Gibson County, Big Four Oil & Gas Co. No. 5 Lottie Hope, SW SE section 18, Washington Township, had an initial production of 40 bbls. Mid-West Developing Corp. No. 1 Maud & Dennis, NW NW section 26, Columbia Township, produced an initial of 100 bbls.

In Perry County, Haney & Hollingsworth No. 1 Mamie Schortz, section 8, is a gas well at 512 feet. Kentucky Natural Gas Co. No. 1 Mary A. Kress & Co. was dry at 552 feet. In Spencer County, T. F. Seitz No. 6 Edward Lorch, section 11, Huff Township, produced 10 bbls.

In Sullivan County, Lord & Glengarry Oil Co. No. 1 Luke Squires, section 26, Haddon Township, was dry at 812 feet.

In Vanderburg County, George R. Ranos No. 1 Charles N. Culbertson, section 30, German Township, produced an initial of 50 bbls. at 1,250 feet. Nelson and others No. 1 Lewis Kern, section 2, same township, was dry.

In Logan County, Jack Center Oil & Gas Co. is drilling No. 1 Vera Haradon, section 6, Stokes Township.

In Perry County, Preston Oil Co. No. 1 Chas. and H. A. Gilmore, section 6, Reading Township, is a gas well at 2,810 feet.

In Pike County, Dilly & Millers No. 2 Willard Morrison heirs, section 30, Washington Township, produced an initial of 60 bbls. at 1,131 feet. Harry Hanson & Co. No. 1 L. E. Dickerman, section 32, Clay Township, is drilling, and Managers Discount Corp. is drilling No. 3 Jennie Cassiday farm, same section.

KENTUCKY

In McLean County, Helt Booth & Nall, in the James tract, Livermore area, completed a good gas well with 2,225,000 feet. J. B. Mayer & Co. No. 4 Lula Cox farm, same county, produced 75 bbls. Ellis & Barrett No. 7 Otto Howard had an initial of 50 bbls. Felix Miles No. 1 Kelly Atherton, McLean County, was dry. Sunflower Oil & Gas Co. No. 8 H. Howard farm, was dry.

La.-Ark. Fields

(Continued from Page 58)

ing deepened below the gas producing horizon, is now coring hard sand at 6,612 feet.

De Soto Wildcats

Two deep wildcat operations were abandoned last week in DeSoto Parish. S. S. Alexander and others No. 1 J. R. Stell, in section 5-12-16, near Logansport, was abandoned in salt water bearing formation at 6,002 feet.

With elevation of 246 feet, the Alexander failure had top of massive anhydrite at 5,023 and the hole flowed salt water when tested at 5,170 feet.

Larkin & Waar No. 1 Jackson, in section 1-11-14, DeSoto Parish, was abandoned at 5,504 feet. It is in the Spider area. With elevation of 329 feet, top of massive anhydrite was logged at 4,915 and base of the last stringer at 5,104 feet.

North of Lide & Greer's discovery wet gasser in Bienville Parish, Herman L. Brown No. 1 S. Gardner, in section 10-17-4w, in Lincoln Parish, had a small amount of Oolitic lime in the bottom of a core from 5,532 to 5,567 feet and dense, fossiliferous with a little gray Oolitic lime near the base of another core to 5,580 feet.

A. H. Tarver No. 2 Baker, Saline Parish test in section 36-8-12, which blew out last week at 5,200 feet, is preparing to deepen. Operators stuck drill pipe 1,400 feet off bottom after the blowout, but the hole has been conditioned for proceeding.

In addition to the deep wildcat tests now drilling in northern Louisiana and southern Arkansas, it is estimated by some company executives that 50 to 75 more geophysical and torsion balance prospects definitely or tentatively outlined in the area will be explored during remainder of 1936.

Approximately 18 geophysical parties were working in various parts of North Louisiana and South Arkansas last week.

Completions

Details of the past week's completions follow:

Caddo Parish

Haynes Production Co. No. 12 Lawton, section 14-23-16, completed flowing 105 bbls. per hour through 1¾-inch tubing choke against casing pressure of 650 pounds. Top of oil saturation was 5,986 and total depth is 6,012 feet; No. 5 Otwell, section 14-23-16, flowed 130 bbls. of oil per hour through 1¾-inch tubing choke against 425 pounds casing pressure

and 100 pounds tubing pressure from Rodessa pay topped at 5,986 and drilled to 6,006 feet. Magnolia Petroleum Co. (was R. W. Norton) No. 1 Slattery, in section 28-23-16, completed flowing 28 bbls. of oil per hour through one-quarter inch tubing choke against 1,000 pounds tubing pressure from Rodessa pay topped at 5,977 and drilled to 5,992 feet; No. 2 Spearman unit, in section 18-23-15, is an abandoned derrick and the company will not drill the location. Phillips Petroleum Co. No. 3 Norton estate, in section 18-23-15, completed flowing 22 bbls. per hour through 11/32-inch tubing choke against tubing working pressure of 400 pounds. Saturation was topped at 6,010 and the well bottomed at 6,038 feet. United Gas Public Service Co. No. 4 M. L. Pitts unit, in section 13-23-16, completed flowing 28 bbls. per hour through three-eighths inch choke on tubing from saturated Rodessa pay topped at 6,039 and drilled to 6,047 feet; No. 16 Rodessa Oil & Land Co., in section 23-23-16, completed flowing 55 bbls. of oil per hour through one-half inch tubing choke against tubing pressure of 450 and casing pressure of 300 pounds from saturated pay topped at 5,976 and drilled to 6,016 feet; No. 1 W. B. Spearman unit, in section 15-23-16, recompleted for 440 bbls. per day through one-half inch tubing choke at the 5-foot greater depth of 6,000 feet; No. 3 M. L. Pitts unit, in section 13-23-16, completed flowing 17 bbls. per hour through one-quarter inch tubing choke with 1,845 pounds pressure on casing and 1,000 pounds on tubing. Top of saturation in the Rodessa pay was 6,010 feet and the hole was carried to 6,050 feet. Pipe was gun perforated with 12 shots from 6,035 to 6,042 feet.

Cass County, Texas

Magnolia (was Norton) No. 2 Mary Rives, in John Collum Survey, completed flowing 28 bbls. per hour through one-quarter inch tubing choke against 900 pounds tubing pressure and 1,000 pounds casing pressure, from saturated Rodessa pay topped at 5,978 and drilled to 6,003 feet.

De Soto Parish

S. S. Alexander No. 1 J. R. Stell, in section 5-12-16, has been abandoned at 6,002 feet in salt water sand. E. B. Bird and others No. 1 A. D. Johns, in section 20-14-16, has been abandoned at 2,652 feet and plans for deepening have been canceled. Larkin & Waar No. 1 Jackson, in section 1-11-14, has been abandoned in salt water sand at 5,504 feet. Union Petroleum Co. No. 1 Hill, in section 3-10-13, is abandoned at 1,400 feet.

Sabine Parish

Whitehurst & Myers No. 1 Paul, in section 24-9-14, has been completed at 1,940 feet, pumping 10 bbls. of oil and 50 bbls. of salt water per day.

Miller County, Arkansas

C. V. Lenz No. 7 Dale, in section 24-15-26, abandoned dry at 2,867 feet.

New Operations

Twenty-one new operations announced last week in northern Louisiana, southern Arkansas and extreme northeastern Texas were concentrated in the Rodessa oil pool and in the Monroe gas field. Scattered wildcats were announced in Red River and Bossier Parish, Louisiana, and in Ouachita and Union Counties, Arkansas. A northeastern outpost test for the Rodessa pool announced by Canadian Oil Co. will receive close attention in the future. The first reports, listed by counties and parishes, for the past week follow:

Bossier Parish

Producers Oil and Gas Co. No. 1 Webb, C of W half of SW quarter of section 22-17-12, derrick.

Caddo Parish

Arkansas-Louisiana Gas Co. No. 17 Rodessa Oil & Land Co., 330 feet north and 336 west from the SE cor. of SW of NW quarter of section 23-23-16, derrick; No. 18 Rodessa Oil & Land Co., 578 feet south and 611 east from the NW cor. of section 23-23-16, location. Canadian Oil Co. No. 1 Comegys, 330 feet north and 330 west from the SE cor. of section 10-23-16, rigging up. Magnolia Petroleum Co. (was R. W. Norton) No. 3 Foscue unit, 660 feet south and 660 west from the NE cor. of section 29-23-16, derrick; No. 4 Foscue, 600 feet north and 600 west from the SE cor. of section 20-23-16, rigging up. Phillips Petroleum Co. (formerly Bartex Pipe Line Co.) No. 5 Norton estate, 650 feet north and 330 east from the SW cor. of NW quarter of section 17-23-15, location. United Gas Public Service Co. No. 10 N. S. Tyson unit, 330 feet north and 330 east from the SW cor. of SE of SE quarter of section 11-23-16, location.

Cass County, Texas

United Production Co. No. 1 F. S. Simpson, 660 feet due north of Texas Co. No. 1 E. E. Hall in the James Young Survey, derrick.

Morehouse Parish, Louisiana

John E. Farrell No. 15 State, 1,208 feet south and 68 west from the NE cor. of section 28-21-4e, drilling at 1,800 feet; No. 17 State, 1,262 feet north and 1,739 east from the SW cor. of section 33-21-4e, drilling at 1,700 feet; No. 18 State, 198 feet south and 1,753 east from the NW cor. of section 9-21-4e, derrick pattern; No. 19 State, 2,009 feet north and 2,016 east from the SW cor. of section 4-21-4e, derrick pattern.

Red River Parish

Byrd Exploration Co. No. 1 Edge, 270 feet north and 268 east from the SW cor. of NE of SE quarter of section 29-13-11, drilling at 1,600 feet.

Union Parish

John E. Farrell No. 20 State, 988 feet south and 4,261 feet east from the NW cor. of section 4-21-4e, derrick pattern. Southern Carbon Co. No. 9 Grayling, 1,260 feet north and 1,954 feet west from the SE cor. of section 8-21-4e, location; No. 10 Grayling, 1,261 feet north and 660 east from the SW cor. of section 9-21-4e, location.

Ouachita County, Arkansas

Delta Drilling Co. No. 1 Calion Lumber Co., in the SE of SE quarter of section 22-15-15, location. Carnes & Harrell No. 1 Dunn & Robinson, 440 feet south and 440 east from the NW cor. of NW of SE quarter of section 7-12-19, rigging up.

Union County, Arkansas

J. E. Crosbie, Inc., No. 5 M. W. Sullivant, 393 feet north and 341 west from the SE cor. of SE of NW¼ of section 12-17-14, derrick. Kinnebrew & Simpson No. 1 L. Adams, in the SW cor. of NE of NE quarter of section 12-17-14, location.

To All

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Wyatt Metal & Boiler Works

East and East Central Texas

By L. E. BREDBERG

TWO MORE TESTS IN TALCO; ANGELINA COUNTY WILDCAT

DALLAS, Tex., May 4.—Only one wildcat location was staked in the East Texas district this week, Bill LaRue of Athens drilling a shallow test on lands of the Cameron Lumber Co. in the I. Ray Survey, in Angelina County. The test logged the Weches at 1,178-1,201 feet and is drilling at 1,360 feet.

Two more tests are to be started in the Talco area in northwest Titus and northeast Franklin County. One is to be in the W. B. Alexander 42 acres in the Orlando James Survey in northeast Franklin County, and one across the county line on the W. A. Clear 40-acre tract in the A. Ehinehart Survey, Titus County. Both are in the vicinity of the Hughes and King extension well of the Talco area.

Operators have been waiting to hear results of Humble Oil & Refining Co. No. 1 Galt, in the R. Winn Survey, about 1 mile east and a little south of the Talco discovery. The company has been withholding information on cores, but is known to have cored a thick section of the Paluxy sand, producing formation, which has registered a high percentage of saturation. It is shut down at 4,352 feet after making a second drill stem test at 4,347 feet. Top of the Paluxy was logged at 4,186 feet, elevation 346 feet.

A 12-minute drill stem test made between 4,186-4,318 feet, using three-eighths inch choke at the bottom and a 2-inch choke at the top, showed 825 feet of mud, 630 feet of oil and mud, 600 feet of oil, and 120 feet of brackish water. The water must not have been of any consequence as drilling continued. If the water proves salt, and in troublesome quantities, the company probably figured it could be cased off and a producer made above the showing of salt. Drilling to such an extent in the sand was no doubt for geological reasons and to see just how much Paluxy exists, and if a greater drilled thickness would produce any more oil than found in the two producers. The brackish water was probably wash water. The test is about 1 mile west of the company's No. 1 Groves, in the Ben Jones Survey, recently temporarily abandoned at a total depth of 4,492 feet. Casing has been set on this test with expectations of carrying it down in quest of production from the Glen Rose, lower Trinity. The company's No. 2 Groves, a quarter mile south of No. 1 on the same lands cut the fault near the top of the lime section, the Georgetown having been logged at 3,680 feet. This and the Galt test will be watched for further results as No. 2 Groves will be due to log the Paluxy within 100 feet from where it is drilling, around 4,000 feet.

Another test soon due for completion is a west offset to Pleasant Oil Co.'s discovery on the Carr lands. Magnolia Petroleum Co. is drilling this test on the same lands as the discovery. It is down 3,800 feet, with only a couple of hundred feet to go to log the pay sand found in the discovery. It logged the Pecan Gap chalk at 1,634-1,790 feet and Austin chalk at 3,010 feet. Bottom of the chalk has not been reported, but has been drilled through.

Trinity Test in Rusk

Pure Oil Co. No. 1 W. H. Faulkner, William Elliott Survey, on a faulted structure near Mt. Enterprise in southeast Rusk County, was drill-stem tested last week, but showed no gas or oil after plug was drilled and hole unloaded at 3,465 feet, where 9-inch pipe was set. The Georgetown lime was topped at 3,446 feet, and it is drilling below 4,025 feet. Elevation is 563 feet. It is the most interesting test outside of the Talco area, slated to go to 8,500 feet.

A deep test is proposed for Hopkins County, Dilworth Hager and associates having taken a block in the eastern part of the A. Whetmore Survey. If drilled it is to go to the lower Glen Rose.

A semi-deep test is planned in the Boggy Creek field in Cherokee County by Joe Sanders and others. It is to be located on the Ware tract in the John Trimble Survey and is to drill to 4,000 feet.

A test will probably be drilled on a block of 4,000 acres in the northwest part of Wood County as two independents have leased it recently.

East Texas Field

One sector of the eastern edge of the East Texas field was defined when Sun Oil Co. completed two failures in Gregg County. The two "dusters" are on the A. G. Morton 336-acre lease in the Silas Baggett Survey. One was given up at 3,461 feet and the other at 3,503 feet, both in the Georgetown.

The field, which now has a producing area of around 140,000 acres, had an addition this week when P. E. Carter and others drilled a producer on the O. F. Medlin tract in the William King Survey on the northwest flank in Upshur County. Sand was logged at 3,751-52 feet, the 1 foot saturated streak making 45 bbls. in 30 minutes through open tubing when tested.

Recently several more producing properties have changed hands. Overtex Oil & Gas Co. sold its Rettig lease in the Sparks Survey, Rusk

PETROLEUM GEOLOGISTS WITH THE VARIOUS OIL COMPANIES AT MIDLAND, TEX.

Top row, left to right: W. F. Bailey, Texas Co.; James Fitzgerald, Jr., Skelly Oil Co.; E. Russell Lloyd, independent; Frank Scouten, Stanolind Oil and Gas Company; Richard E. Gile, Tide Water Oil Company; Paul Osborne, consulting geologist.
Front row, left to right: Huyler Lee, consulting; Paul Oles, Pine Rock Oil Co.; J. E. Simmons and Charles Vertrees, both with Continental Oil Co.; E. Hizer Woods, Sinclair Prairie Oil Co.

Top row, left to right: J. E. Adams, California Co.; J. M. Hill, Amerada Petroleum Corp.; J. H. Markley, Texas Co.; Maria Spencer, Superior Oil Co. of California; Charles A. Mix, California Co.; Paul Martin, Gulf Oil Corp.; J. H. Regan, I.T.I.O. Co.; Addison Young, Landreth Production Co. Bottom row: A. P. Loskamp, Barnsdall Oil Corp.; O. C. Harper, York and Harper; Georges Vorbe, Stanolind Oil & Gas Co.; W. C. Fritz, Skelly Oil Co.; Bob Steele, I.T.I.O. Co.; Joseph E. Puryor, Phillips Petroleum Co.

County, including two wells, to DeArmon and Bauman. F. C. Hall sold his Colburn lease in the Hathaway Survey, Gregg County, including two wells, to Kilgore and Hanson and Rudco Oil & Gas Co. has taken over Smith County Oil & Gas Co. S. S. Cook lease, in the Vargas Survey, Smith County, including eight wells.

Miscellaneous Completions
East Texas Field
Anderson County

E. P. Corley No. 1 Hurt Heirs, total depth 4,057 feet, 112 bbls. in 24 hours through one-eighth inch choke. Tide Water and Seaboard Oil Co. No. 1 Murray, total depth 5,321 feet, 93 bbls. in 19 hours through one-eighth inch choke.

Angelina County

La Rue No. 2 Ivey, dry and abandoned 1,455 feet, north of Huntington. Norris and others No. 1 Pruyear, dry and abandoned 800 feet, 7 miles E of Huntington. Wilson No. 1 Forrester, dry and abandoned 805 feet, 3½ miles east of Huntington.

Red River County

Orr and others No. 1 Kurth Lumber Co. dry and abandoned 1,205 feet, 10 miles NE Clarksville.

Rusk County

Shipman and others No. 1-A Citizens Bank, dry and abandoned 3,510 feet, elevation 432 feet.

Van Zandt County

Pure Oil Co. No. 14 York, total depth 2,934 feet, top sand 2,864 feet, 85 bbls. per hour through eleven-sixteenths inch choke.

Gulf Coast Fields

(Continued from Page 57)

line of a 133-acre tract in the Josiah Blackman Survey. In the northwestern corner of the County H. W. Blumenthal is clearing location for No. 1 Delta Land & Timber Co., 1,830 feet south of the north line and 460 feet east of the west line of the J. Beuhn Survey.

Brazoria County

On the Lockridge prospect, Brazoria County, Gulf Oil Corp. encountered a deep sand in No. 1 Fairfield at 8,398 feet and preparations are being made to make a drill stem test. The sand showed considerable gas pressure and attempted to blowout.

Wharton County

At the Blue Basin Prospect, Wharton County, Pure Oil Co. has perforated 6⅝-inch casing set at 8,500 feet, from 7,680-7,700 feet, scheduled to be tested during the week. This section of sand has shown considerable gas pressure and the well is expected to be a gas well. The hole was originally drilled to 9,200 feet, but was lost below 8,500 feet due to heaving shale. It is in the James Pierce Survey.

Coastal Louisiana

The discovery of two deeper producing horizons at the Bayou Mallet field in Acadia Parish and the St. Martinsville field in St. Martin Parish together with the announcement of an interesting wildcat test in Terrebonne Parish were the featured developments along the Louisiana Coast the past week.

Superior Oil Producing Co. No. 2 Bradley, 990 feet south 37 degrees east of No. 1 Bradley was drilled to 7,206 feet and with 7-inch casing cemented at 7,198 feet, was completed through perforated casing from 6,996-7,000 feet for an initial production of 120 bbls. of fluid per day through an eight-sixty-fourth inch choke with tubing pressure 350 pounds and casing pressure 600 pounds. It is making considerable wash water and its production is expected to increase after it has thoroughly cleaned itself. This sand is about 500 feet deeper than that section found in No. 1 Bradley at around 6,300 feet.

Tide Water Oil Co. No. 2 Smedes, in the St. Martinsville field, St. Martin Parish, made a four and one-half minute drill stem test from 6,640-55 feet and showed 275 pounds of pressure and two stands of drilling mud through a quarter-inch choke on top and bottom. While being completed for a gas well a leak developed between the 9⅝-inch casing and the well was killed so no gauge is available. Continental Oil Co. No. 1 fee is drilling in shale below 8,125 feet. Sand cored from 7,343-67 feet by laboratory test showed 3½ per cent saturation and by an electrical coring test 25 ohms resistivity. Another section cored from 7,480-84 feet and 7,711-25 feet showed 3½ per cent saturation.

On the Castel Prospect, Terrebonne Parish, Humble Oil & Refining Co. is moving in piling for No. 1 Continental Land & Fur Co., 400 feet east of the west line and 350 feet north of the south line of section 30-17s-14e. The wells are on a large block which has been worked extensively with geophysical instruments.

Tepetate

West of the Tepetate field in Acadia Parish much attention is being centered on the outpost test of General Crude Oil Co. No. 1 Vincent in section 31-7s-2w drilling in sand below 7,953 feet. It is reported to be checking from 50 to 80 feet higher than other wells in the field and if so it should encounter the sand the first part of the week. Continental Oil Co. No. 1 Adras Young in section 29 was completed through perforated casing from 8,303-18 feet, total depth and flowed 260 bbls. through a quarter-inch choke in eight hours with tubing pressure 1,950 pounds and casing pressure 2,450 pounds.

Another showing of oil and gas was encountered in Shell Petroleum Corp. No. 1 Colonial Sugar wildcat on the north bank of the Mississippi River in section 5-12s-5e, St. James Parish. Sand showing oil and gas was topped at 6,813 feet and at last report, the operators were coring ahead in sand at 6,814 feet. It will be cored a few feet deeper and a drill stem test made.

Fohs Oil Co. No. 1 Frost, midway between the two producing areas of the Gillis field, Calcasieu Parish, was completed in a shallow sand from 5,257-67 feet and flowed 126 bbls. per day, 6 per cent b.s. and water through a three-eights inch choke with tubing pressure 400 pounds and casing pressure 600 pounds. The well is in section 11-9s-8w and it opens the third producing horizon for the field.

At Cheyenville, Rapides Parish, Amerada Petroleum Corp. No. 3 Weil, in section 53-1s-2e was completed in sand from 5,712-19 feet, the total depth, and flowed 141 bbls. per day.

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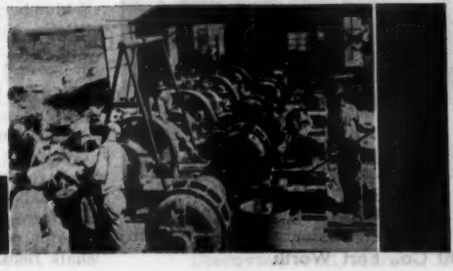

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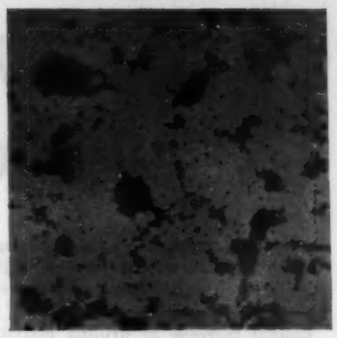

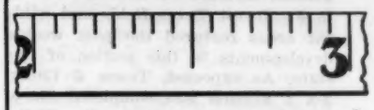

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Southwest Texas District

NEW FIELD IN EASTERN JIM WELLS; INCREASED ACTIVITY

By
GEORGE WEBER

SAN ANTONIO, May 4.—The opening of a new oil field in Jim Wells County, the possibility of two or three additional discoveries and a general increase in drilling activity in Southwest Texas fields and wildcat areas featured the past week's developments in this section of the state. As expected, Texon & Lucey No. 1 Rolston was completed for a good producer in eastern Jim Wells County, and the new field has been named the Bentonville, for the small town south of the discovery well. Meanwhile, indications of new gas production loomed in McMullen County by Magnolia Petroleum Co. No. 2 Kincaid and the possibility of another small field in the Rio Grande Valley district became apparent as operators obtained shows of oil in the shallow Maxwell test southwest of McAllen in Hidalgo County. Potential production was also reported in Atascosa County. Numerous extensions were completed to fields of this area, notably Plymouth and Pearsall. Wildcatters are being increasingly attracted to Live Oak and McMullen Counties and the Lower Coastal region while operations have grown in many small fields of Duval County.

Early in the week, Texon & Lucey completed No. 1 Rolston in section 17, R. King Farm Lots Subdivision, Jim Wells County in sand recorded at 5,380-90 feet. The well ganged 61 bbls. in six hours on a five-thirty-seconds inch choke with casing pressure of 880 pounds and 660 pounds on the tubing. Gravity of the oil is 39.6 degrees. The operators have started moving in on a northwest diagonal offset located in the southeast corner of section 15. Stanolind Oil & Gas Co. has staked a north offset location in the southwest corner of section 18.

Deeper Sand

The new field is located about 2 miles southwest of the King gas field, but production is coming from a deeper sand. Across the line in Nueces County La Jita Oil Corp. No. 2 King is coring below 5,450 feet. The test in the King field cored 2 feet of oil sand at 5,380-82 feet, but did not test due to the thinness of the sand.

In McMullen County, Magnolia Petroleum Co. No. 2 Kincaid, a wildcat in Survey 86, plugged back from below 3,100 feet to a gas sand at 1,322 feet, and will drill plugs over the week end. In the same county V. G. Schimmel is rigging up on a test one-half mile south of the Loma Alta field on the southern edge of the county. Activity has been quiet in that area for several months.

Brooks County is seeing increased activity with two tests beginning in the newly opened Alta Verde field.

In San Patricio County, another attempt is being made to bring Benedum & Trees Co. No. 2 Welder into production. The wildcat tested oil in sand at 5,696-5,710 feet, and cored oil sand at 6,116 feet. It has been plugged back to 5,600 feet and plugs will be drilled during the week end. The Plymouth field in the same county is being extended on the south by two tests, Humble Oil & Refining Co. No. 1 Bevly and Texon Royalty Co. No. 1 Rambo. The former test has casing set at 5,640 feet. in oil sand, and the latter tested four fourbles of oil at 5,648-53 feet, and also has casing set.

In the Taft field, south of Plymouth, two tests are in the stages of attempted completion. Humble Oil & Refining Co. No. 1 Godwin was perforated and screen and liner is being set at 4,010 feet. Shell Petroleum Corp. No. 1 Pullin is swabbing with bottom of the hole at 4,915 feet. Closed in casing pressure of 240 pounds was recorded.

Intense Activity

Intensive activity continues in the Saxet Heights field of Nueces County. This field on the outskirts of Corpus Christi is the scene of considerable offset drilling; many of the tests located on small tracts. Adverse Railroad Commission rulings cutting the allowables on wells in this field may have an effect on drilling hereafter. Much of the field's crude is being produced with a high gas-oil ratio, and workovers have been necessary in several cases to continue oil production. Activity for the present is unabated, however, with six completions during the past week, and 15 new drilling permits issued by the Railroad Commission. The state is preparing to lease submerged land in Nueces Bay which now practically adjoins the field.

Development of the 5,800-foot Frio sand in the Saxet field, also in Nueces County is receiving attention as one test, Morgan Gulf Oil Co. No. 2 Morgan in section 403 is set on the sand and another, Southern Minerals Corp. No. 1 Maston is approaching it.

Activity in Duval County, while generally concentrated in the two large active fields Loma Novia and Seven Sisters, spread to several of the smaller proven areas. The Hoffman field has five active tests beginning or shortly to begin. Toward the south, the Driscoll field is again active with a rig being moved in to drill Continental Oil Co. No. 9-A Sevier. The Hagist field has one rig drilling as does the Loma Vista an undeveloped proven area opened last year. Stanolind Oil & Gas Co. is moving in on another test in the Labbe gas field east of Seven Sisters. North of Government Wells, three companies are drilling the Piedra Lumbre field.

Loma Novia Leads

Loma Novia led all fields again this week in number of completions. Seventeen producers were brought in, the majority in the southern part of the field. Several of the proven blocks in that portion of the field are rapidly being drilled up, but much proven acreage remaining in the central east and southeast parts of the field will hold routine drilling operations high in the field for some time to come.

The Seven Sisters field in northern Duval County, second most active spot in the county added 11 new producers, all but one in the Government Wells sand. The exception, Diamond Half Oil Co. No. 4 Serna was brought in from the Chernosky sand at 2,220 feet. Drilling in this field continues to be widespread, with rigs active in all parts of the proven area and on edge locations in several directions.

The Lopez field, at present receiving the most attention in Webb County, added six new wells during the week, one of which was a gasser. Expected developments in the northeastern section of the field following the completion of Luling Oil & Gas Co. No. 1 Peal as a gasser have not yet begun. The Luling well ran high, indicating an eastward trend of the field in the north. In O'Hern field of the same county, two producers were completed.

The Pearsall field of Frio County was extended during the week by the completion of Amerada Petroleum Corp. No. 1 Correy & McWilliams. The new well located in Tract 6, of Jose Arocha Survey 298, gauged 656 bbls. in seven hours on a three-fourths inch choke. The new producer is bottomed at 5,565 feet. The same company's No. 1 Kothman, a workover, also extended the field in the 5,400-foot horizon gauging 178 bbls. in eight hours.

Rio Grande Valley

The Rio Grande Valley is experiencing an upturn in activity, particularly in the Samfordyce field of Hidelgo and Starr Counties. In that field four completions were made during the week, and added new locations throughout the field were staked. Three rigs are active in the Mercedes field of Hidalgo County, and completion is being sought in Union Sulphur Co. No. 7 American Rio Grande, swabbing at 7,549 feet.

New production in the county seemed likely as Maxwell No. 1 Hidalgo Water district near the town of Alamo was showing oil while bailing at 650-56 feet. In contrast, the deepest test in Southwest Texas to date, Quintana Petroleum Co. No. 1 Engleman is coring below 8,400 feet in the same county. It is located in the Mestanna area. Willacy County, with one wildcat drilling at 3,726 feet will get another test. M. E. Morton and others No. 1 Santa Rosa will drill to 3,200 feet in the eastern portion of the county primarily to test the 2,900-foot sand shown on a Schlumberger log of the Kingwood Oil Co. No. 1 Santa Rosa. This test will also be watched with interest by several operators who have been active in leasing in this county recently.

In Atascosa County, Atascosa Trust Co. No. 1 Domsch is reported to have cored saturation in the Austin chalk at 3,487-3,500 feet. Plans call for coring deeper and setting casing for possible discovery of a new chalk field.

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H. L. Johnston, superintendent of production, Continental Oil Co., New Mexico district, Hobbs. J. C. Johnston, assistant division manager, Continental Oil Co., Fort Worth

Rocky Mountain Area

CUSACK GETS A BIG WELL ON NORTHEAST FLANK OF HOBBS

By T. R. INGRAM

DENVER, Colo., May 4.—The South Park Oil Co.'s discovery in the Hartsel district in Colorado is cleaning out cavey ground and lowering pipe to the top of the pay preliminary to coring into the sand. Two old wells resumed drilling.

One wildcat was abandoned in Wyoming in the Wilmington Oil Co.'s test in the Red Desert district in Sweetwater County. Two wells are near completion in Lance Creek.

Montana reported three completions in Cut Bank, one of which marks a short extension of the proven territory, and one in the Kevin-Sunburst field. It may be a month before a test on the Montana-Dakota Utilities Co. discovery well in Fallon County can be made. The Pendroy district in Teton County is to have another test this summer.

NEW MEXICO

The largest completion of the week in New Mexico was the J. P. Cusack, Inc., No. 2 Moon "B", SW SW NE NE section 28-18-38, near the northeast flank of the Hobbs pool. It flowed 8,489 bbls. through casing and tubing in 24 hours after being treated with 15,000 gallons of acid. After the initial treatment of 5,000 gallons failed of the desired results, it was reacidized with 10,000 gallons. Gas measured 9,500,000 feet. Production was from pay at 4,209-25 feet total depth.

In the Eunice area, Continental Oil Co. No. 7-B-4 Meyer, C NW SE section 4-21-36, produced 2,472 bbls. of oil through three-quarter inch tubing choke, natural, in the first 24 hours. Gas gauged 1,300,000 feet. Top of pay was 3,818 feet; total depth, 3,873 feet. Same operators No. 4-B-28 Lockhart, C SW SW section 28-21-36, had oil pay at 3,898-3,901 feet, and was bottomed at 3,927 feet. In the first 24 hours after acidizing, it flowed 288 bbls. through tubing choke, with 200,000 feet of gas. Texas Co. No. 1 State-Aggies, C SE SE section 31-20-37, flowed 960 bbls. of oil through tubing the first 24 hours after acidizing with 2,000 gallons. Gas gauged 960,000 feet. The pay was had at 3,742-3,862 feet, total depth.

The largest producer completed in the Monument area was the Empire Gas & Fuel Co. No. 1 State "E", C NE SW section 30-19-37. It was treated with 1,000 gallons of acid and in the first 24 hours flowed 3,768 bbls. of oil, through tubing, with 1,500,000 feet of gas. Before acidizing it flowed 40 bbls. per hour for 16 hours, through tubing. Pay was had at 3,857-3,970 feet, total depth. Gulf Oil Corp. No. 6 Culp, C NW NE section 19-19-27, had pay at 3,860 to 4,017 feet, total depth, flowed 1,776 bbls. of oil natural through tubing in 24 hours and was completed. Gas measured 1,750,000 feet. Same operators No. 2 Graham-State "D", C SE SE section 19-19-37, flowed 768 bbls. of oil naturally through tubing in 24 hours, with gas measuring 900,000 feet. Top of oil pay was 3,845 feet; total depth, 4,004 feet. Oilwell Drilling Co. No. 1 State "A", C SW NE section 29-19-37, was completed at 3,952 feet, total depth, in pay topped at 3,810 feet. It was acidized with 2,000 gallons and flowed 1,086 bbls. in the first 24 hours. It previously had been acidized with 2,000 gallons, after which it flowed at the rate of 900 bbls. daily. Gas gauged 500,000 feet. Amerada Petroleum Corp. No. 1 Weir "A", C NW SW section 25-19-36, had pay at 3,840-97 feet, drilled to 4,001 feet, total depth, and plugged back to 3,897 feet to complete. After acidizing and a 75-quart shot, it flowed 134 bbls. through tubing in 24 hours. Same operators No. 4 Weir, C SE NW section 35-19-36, was acidized with 1,000 gallons and flowed 818 bbls. of oil through 1-inch tubing choke in the first 24 hours, with gas gauging 495,000 feet. Pay was had at 3,820-3,945 feet.

In the Jal sand area, Harry Leonard No. 1 Leonard-Lanchart, C SW NE section 21-25-37, was completed at 3,007 feet, total depth, in pay topped at 2,991 feet. It flowed 44 bbls. of oil naturally in 24 hours through casing, and produced 4,880,000 feet of gas daily.

Monument Area

Texas Co. No. 2 Saunders, C SW SE sec. 18-19-37. T.D. 4,000 ft.; connecting to tube.

Continental Oil Co. No. 2-C-30 State, C NW SW sec. 30-19-37. T.D. 3,910 ft.; drill pipe stuck; whipstock at 3,833-3,871 ft.; waiting on cmt.

Anderson & Prichard Oil Corp. No. 1 Britt "A," C SE SW sec. 6-20-37. T.D. 3,906 ft.; taking drill stem test.

Skelly Oil Co. No. 1 Christmas, C SW SW sec. 25-19-36. T.D. 3,942 ft.; flowed 77 bbls. in 24 hrs.; reacidized; est. 60 bbls. in 24 hrs.; shut in for orders.

Shell Pet. Corp. No. 2 State "D," C NE SE sec. 19-19-37. Drlg. 3,995 ft.

Gulf Oil Corp. No. 1 G. C. Mathews, C SW SE sec. 6-20-37. T.D. 3,720 ft; set 7-in. csg.

Gulf Oil Corp. No. 1 A. B. Reeves, C NW SW sec. 29-20-37. Wildcat; coring 3,606 ft.

Gulf Oil Corp. No. 3 Graham-State "C," C SW NE sec. 24-29-36. T.D. 1,329 ft.; drlg plug.

Sun Oil Co. No. 4 Weir, C SW NE sec. 25-19-36. T.D. 3,790 ft.; set 5½-in. csg.

Sun Oil Co. No. 6 Weir, C NW NE sec. 25-19-36. Loc.

Texas Co. No. 2 Mattern, C SW SW sec. 20-19-37. Drlg. 3,333 ft.

Amerada Pet. Corp. No. 1 State "P," C NW SW sec. 29-19-37. T.D. 2,500 ft.; set 8¼-in. csg.

Amerada Pet. Corp. No. 1 State "R," C NE SW sec. 29-19-37. Drlg. 535 ft.

Amerada Pet. Corp. No. 2 State "O," C SW NE sec. 30-19-37. Drlg. 2,507 ft.

Texas Co. No. 2 Phillips, NE NE NW sec. 6-20-37. Drlg. 3,146 ft.

Amerada Pet. Corp. No. 1 Weir "B," C SW NE sec. 26-19-36. T.D. 4,000 ft.; acidized; gauged 3,500,000 ft gas; 1 bbl. oil per hour; may deepen.

Amerada Pet. Corp. No. 2 State "H," C NW SE sec. 1-20-36. Drlg. 3,045 ft.

Skelly Oil Co. No. 2 State "D," C NE SE sec. 1-20-36. Drlg. 3,030 ft.

Texas Co. No. 4 State "E," C NE SW sec. 1-20-36. Drlg. 2,235 ft.

Tide Water Oil Co. No. 1 State "F," C NW NW sec. 20-19-37. Drlg. 3,357 ft.

Ohio Oil Co. No. 2 State-Elliott, C NE SE sec. 30-19-37. Drlg. 2,642 ft.

Continental Oil Co. No. 2-A-6 Britt, C NW SW sec. 6-20-37. Drlg. 2,288 ft.

Fred Turner, Jr. No. 1 State "A," NE NW SW sec. 2-20-36. T.D. 1,211 ft.; set 9⅝-in. csg.

Texas Co. No. 3 Phillips, C SW NW sec. 6-20-37. T.D. 265 ft.; set 15½-in. csg.

Anderson-Prichard Oil Corp. No. 2 Britt, SE SW NE sec. 7-20-37. Bldg. rig.

Sun Oil Co. No. 1 State, C NE NE sec. 25-19-36. T.D. 300 ft.; reaming.

Anderson-Prichard Oil Corp. No. 1 State, C SW NW sec. 2-20-36. Spudded.

Gulf Oil Corp. No. 2 Luthy, C NW NW sec. 29-19-37. Drlg. 1,530 ft.

Amerada Pet. Corp. No. 3 State "O," C SE NE sec. 30-19-37. Drlg. 1,010 ft.

Continental Oil Co. No. 4 State "C," C SW NW sec. 30-19-37. Cellar and pits.

Continental Oil Co. No. 3 State "C," C SE NW sec. 30-19-37. Drlg. 1,880 ft.

Amerada Pet. Corp. No. 1 Lambert, NW NW NE sec. 6-20-37. Drlg. 1,135 ft.

Amerada Pet. Corp. No. 1 State "S," C SE SW sec. 2-20-36. Location.

Gulf Oil Corp. No. 1 S. T. Burk, C NE NE sec. 28-19-37. Rigging up rotary.

Amerada Pet. Corp. No. 4 State "O," C NE NE sec. 30-19-37. Rig.

Texas Co. No. 1 State "J," C NE SW sec. 24-19-36. Rig.

Amerada Pet. Corp. No. 1 State "T," C SE SW sec. 25-19-36. Cellar and pits.

Shell Pet. Corp. No. 1 J. A. Foster, C SE SE sec. 24-19-36. Rigging up rotary.

Amerada Pet. Corp. No. 3 Phillips, C SW NE sec. 1-20-36. Bldg. rig.

Amerada Pet. Corp. No. 3 State "D," C SE NW sec. 1-20-36. Bldg. rig.

Gulf Oil Corp. No. 4 Graham-State "C," C SW SE sec. 24-19-36. Cellar and pits.

Gulf Oil Corp. No. 1 J. W. Smith, C SE NE sec. 24-19-33. Cellar and pits.

Barnsdall Oil Co. No. 5 Cooper, C NE SE sec. 12-20-36. Moving in rotary.

Gulf Oil Corp. No. 7 Culp, C NE NE sec. 19-19-37. Cellar and pits.

Gulf Oil Corp. No. 1 D. A. Williams, C NW SE sec. 29-19-37. Location.

Empire Oil & Ref. Co. No. 2 State "E," SE SE SW sec. 30-19-37. Bldg. rig.

Ohio Oil Co. No. 3 State-Elliott, SW SW SE sec. 30-19-37. Cellar.

Anderson-Prichard Oil Corp. No. 2 Britt "A," C NE SW sec. 6-20-37. Location.

Lea County—Miscellaneous

Culbertson-Irwin & Stovall No. 1 J. B Humphreys, C SE SW sec. 3-25-37. T.D. 3,620 ft.; 700 ft. oil in hole; bailing to test.

Plains Prod. Co. No. 1 George Smith, C SE SE sec. 4-25-37. Drlg. 3,180 ft.

Culbertson-Irwin & Stovall No. 1 J. A. Stuart, C SW SE sec. 10-25-37. T.D. 3,294 ft.; hole full of oil; blew out; open flow est. 500 to 1,000 bbls.; tubing to test.

Harry Leonard No. 1 Justice, SW NW NW sec. 20-25-37. T.D. 3,501 ft.; shut in and shut down.

Texas Co. and Repollo Oil Co. No. 1 Lenchart, C NE sec. 29-25-37. T.D. 2,770 ft.; waiting on cement.

W. L. Todd et al No. 1 Lemon Permit, C NW SW sec. 17-21-32. T.D. 3,752 ft.; shut down.

Maljamar O. & G. Co. No. 6 Baisch, C NW SE sec. 21-17-32. T.D. 4,129 ft. Est. 100 bbls. daily; to acidize.

Sun Oil Co. No. 1 Weatherly, C NE SW sec. 17-21-37, wildcat. T.D. 3,104 ft. Set 7-in. casing.

Ohio Oil Co. No. 1 W. H. Turner, C NE SE sec. 29-21-37. Drlg. 1,336 ft.

Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. T.D. 1,350 ft.; moving in standard tools.

Rowan et al No. 1 Mattern, C SW SE sec. 7-22-37. T.D. 630 ft. Shut down.

C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37, wildcat. Drlg. 1,760 ft.

Gulf Oil Corp. No. 1 E. King, C SW NW sec. 28-21-37. Drlg. 150 ft.

Gulf Oil Corp. No. 1 W. T. McCommack, C NE NE sec. 32-21-37. Drlg. 200 ft.

Continental Oil Co. No. 1 J. C. Farney, C SW SE sec. 5-23-36. Wildcat. Location.

Gulf Oil Corp. No. 1 S. J. Carr, C NW SW sec. 3-24-37. Spudded.

Gulf Oil Corp. No. 2 N. F. Humphreys, C NE NW sec. 25-25-36. Building rig.

Sun Oil Co. No. 1 Stuart, C NW NE sec. 15-25-37. Drlg. 2,135 ft.

Continental Oil Co. No. 2-A-19 Esves, C SW SW sec. 19-26-37. Location.

Shell-Devonian No. 1 Christmas, C NE NE sec. 21-22-36. T.D. 3,884 ft. Swabbed 30 bbls. in 5 hrs. Shot 350 qts. at 3,790 ft.

Gulf Oil Corp. No. 1 J. A. Stuart, C NW NE sec. 10-25-37. Cellar and pits.

Gulf Oil Corp. No. 1 L. M. Buffington, C NW SW sec. 18-25-37. Spudded.

Sun Oil Co. No. 1 Lanchart, C SE SE sec. 20-25-37. Location.

Humble O. & R. Co. No. 1 Lanchart, C NE SW sec. 21-25-37. Moving in.

Eddy County

Ets Bros. No. 2 State, C NW SW NE sec. 16-17-30. Drlg. 2,665 ft.; est. 20 bbls. dly.

Ohio Oil Co. No. 1 State-McCullough, SE SW SW sec. 16-17-30. T.D. 3,097 ft.; fishing.

Premier Pet. Corp. No. 2 Dexter "E," NW SW NE sec. 20-17-30. Drlg. 3,130 ft.

Tignor, Etz. & Keys No. 1 Keys "B," sec. 3-17-28. T.D. 1,315 ft.; set csg.

Red Lake Oil Co. No. 6 State, NE NE SW sec. 22-17-28. T.D. 1,954 ft.; 800 ft. oil in hole; reaming.

D. & B. Oil Co. No. 1 Jenkins, NW SW NW sec. 20-17-30. T.D. 3,258 ft.; testing; est. 200 B.P.D.

Dexter & Berry No. 1 Berry, NW NE NW sec. 21-17-30. T.D. 2,635 ft. Set 6⅝-in. casing.

Dooley & Dixon No. 1 Commerce, C W½ NW NW sec. 18-20-27. Drlg. 690 ft. Small show of oil.

Tex Patillo No. 2 Thompson, NE cor. sec. 1-20-28. Drlg. 1,150 ft.

Chaves County

Tannehill No. 2 Campbell, C NE SE sec. 1-11-25. T.D. 1,400 ft. Pulled 6⅝-in. csg.

Comanche Drlg. Co. No. 2 Sloop & Purcell, C NE NE sec. 15-11-26. Drlg. 420 ft.

Hobbs Area

Shell Pet. Corp. No. 1 State "E," C E half SE SE sec. 14-18-37. T.D. 4,374 ft.; P.B. 4,178 ft.; shut in.

Continental Oil Co. No. 3-B-13 State, C NE SW sec. 13-18-37. T.D. 4,036 ft. Tested 650,000 ft. dry gas; testing.

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 33-18-37; wildcat. Old well plugging back from 4,238 to 4,228 ft.; swabbed sulfur water; no oil; testing.

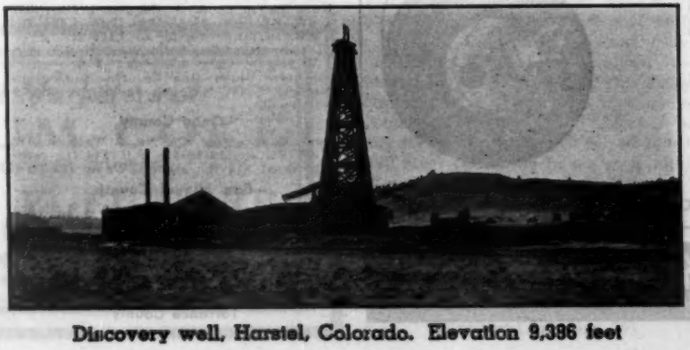
Shell Petroleum Corp. No. 4 Sanger, SW SW NW sec. 27-18-38. Building rig.

Cooper Area

Liberty Oil & Drlg. Co. No. 1 J. W. Hair, SW SW SE sec. 24-24-37. Drlg. 3,655 ft.

Plains Prod Co. No 1 R. L. Mosley, C NW SE sec. 24-24-37. T.D. 3,551 ft.; show sulfur water; P.B. 3,530 ft.; gauged 3,360,000 ft. gas.

Southern Oil Corp. No. 1 Vaughan, C SW SE sec. 15-24-36. Rigging up rotary.



Discovery well, Harstel, Colorado. Elevation 9,386 feet

Southern Oil Corp. No. 1 Gates, C NW NW sec. 23-24-36. T.D. 250 ft. Set 10¾-in. csg.
Skelly Oil Co. No. 5 Coates, C NE SE sec. 3-24-36. Location.

Sims Area

Samedan Oil Co. No. 1 Parks, 330 ft. from S and 400 ft. from W lines, SW¼ sec. 14-22-37. Drlg. 3,273 ft.
Continental Oil Co. No. 1-A-22 Elliott, C SW SW sec. 22-22-37. Drlg. 3,720 ft.
Skelly Oil Co. No. 1 R. L. King, C SW SE sec. 32-22-37. T.D. 3,680 ft.; flowed 84 bbls. oil in 45 minutes after shut in for 11 days; died; to pump.
Skelly Oil Co. No. 1 Ella Simms, C SW NE sec. 3-23-37. Location.
Penrose & Rowan No. 2 Cary, C NE SW sec. 22-22-37. Drlg. 2,920 ft.
Sun Oil Co. No. 1 Richards, C NE SE sec. 6-23-37. Drlg. 3,613 ft.
Humble Oil & Refining Co. No. 1 W. B. Farrell, C SW SE sec. 22-22-37. Drlg. 440 ft.
Tide Water Oil Co. No. 1 A. Walden, C SE NE sec. 21-22-37. T.D. 102 ft. Set 15½-in. casing.
Magnolia Pet. Co. No. 1 Cary, C NE SE sec. 21-22-37. Rigging up.
Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,150 ft.; set 8¼-in. casing.
Continental Oil Co. No. 1-A-15 Elliott, SE SE SE sec. 15-22-37. Location.
Continental Oil Co. No. 1-A-21 Elliott, C SE SE sec. 21-22-37 Location

Eunice Area

Gulf Oil Corp. No. 8 Bell-Ramsey-State, C NW NW sec. 4-21-36. Drlg. 3,590 ft.
Gulf Oil Corp. No. 1 Orcutt, C SW SE sec. 5-21-36. T.D. 3,865 ft.; flowed 33 bbls. in 4 hrs.; acidized, testing.
Gulf Oil Corp. No. 2 Orcutt, C NE NE sec. 5-21-36. T.D. 3,864 ft.; acidized; swabbing to test.
Humble O. & R. Co. No. 3 Adkins, C NE SW sec. 10-21-36. T.D. 3,880 ft. Drlg. plug.
Gulf Oil Corp. No. 5 Arnott-Ramsey "C", C SE SW sec. 21-21-36. T.D. 3,890 ft.; testing.
Gulf Oil Corp. No. 6 Arnott-Ramsey "C," C NE NW sec. 21-21-36. T.D. 3,570 ft.; whipstock at 3,031 ft.; drlg. by at 3,060 ft. Shut down for repairs.
Continental Oil Co. No. 5-B-28 Lockhart, C NW NE sec. 28-21-36. T.D. 3,939 ft. Flowed 30 bbls. fluid per hour after shot, 75 per cent water.
Empire G. & F. Co. No. 2 Felton, C SE NW sec. 28-21-36. T.D. 3,990 ft. Acidized, no results; testing.
Empire G. & F. Co. No. 4 State "D," C SE NE sec. 32-21-36, five-eighths mile N part of No. 157 lease. T.D. 3,941 ft.; acidized, waiting.
Gulf Oil Corp. No. 2 Janda "B," C NE SE sec. 32-21-36. T.D. 3,880 ft. in lime; swabbed dry after acid; S.D.
Gulf Oil Corp. No. 1 Arnott-Ramsey "D," C NW NW sec. 32-21-36. T.D. 3,885 ft.; acidized, no help; cleaning out.
Shell Pet. Corp. No. 1 State-Endura "D," C SE NW sec. 11-21-35. T.D. 4,212 ft.; shut down for orders.
Shell Pet. Corp. No. 1 State "H," C SE SE sec. 13-21-36. T.D. 3,954 ft.; plugged back. Acidized, flowed 75 bbls. fluid in 24 hrs.; to reacidize.
Continental Oil Co. No. 6-A-17 Meyer, C NW SW sec. 17-21-36. Drlg. 3,730 ft.
Continental Oil Co. No. 5-A-18 Meyer, C SE NE sec. 18-21-36. Drlg. 2,897 ft.
Jim Murray No. 2 Wallace, C NW NW sec. 3-21-36. T.D. 3,830 ft. Tubing, to acidize.
Continental Oil Co. No. 1-B-14 Lockhart, C SW NW sec. 14-21-36. Drlg. 1,355 ft.
General Crude Oil Co. No. 2 State "E," C NE SW sec. 32-21-36. Rig.
Shell Pet. Corp. No. 1 State "E," C NE NE sec. 6-21-36. Drlg. 1,110 ft.
Gulf Oil Corp. No. 1 Janda "C," C NW SW sec. 15-21-36. Drlg. 3,806 ft.
Tide Water Oil Co. No. 2 State "E," C SE SE sec. 15-21-36. Drlg. 2,857 ft.
Peerless O. & G. Co. No. 2 State, NE NW SW sec. 29-21-36. Location.
Devonian Oil Co. No. 4 State-Heasley, C SW SW sec. 5-21-36. T.D. 1,240 ft. Set 9⅝-in. csg.
Atlantic Oil Producing Co. No. 1 State "K," C SE SW sec. 6-21-36. T.D. 263 ft. Drlg. plug.
Humble Oil & Ref. Co. No. 4 Adkins, C NW SW sec. 10-21-36. T.D. 1,350 ft. Set 7⅝-in. casing.
Shell Pet. Corp. No. 1 State "J," C SE SW sec. 32-20-37. Rigging up rotary.
Gulf Oil Corp. No. 9 Bell-Ramsey, C SW SW sec. 4-21-36. Rig.
Gulf Oil Corp. No. 4 Orcutt, C SE NE sec. 6-21-36. Rigging up.
Gulf Oil Corp. No. 1 Frona Leck, C NW NE sec. 14-21-36. T.D. 1,418 ft. Set 7⅝-in. casing.
Gulf Oil Corp. No. 7 Arnott-Ramsey "C," C NW NE sec. 21-21-36. Rig.
Continental Oil Co. No. 9-B-4 Meyer, C NE NW sec. 4-21-36. Moving in material.
Continental Oil Co. No. 10-B-4 Meyer, C NE NE sec. 4-21-36. Moving in material.
Continental Oil Co. No. 11-B-4 Meyer, C SE SE sec. 4-21-36. Location.
Humble Oil & Refining Co. No. 5 Adkins, C SE SW sec. 10-21-36. Cellar, pits.
Samedan Oil Co. No. 1 Marshall, C SW NW sec. 12-21-36. Cellar and pits.
Continental Oil Co. No. 5-A-18 Lockhart, C SE SW sec. 18-21-36. Location.
Continental Oil Co. No. 6-A-18 Meyer, C NW NE sec. 18-21-36. Location.
Continental Oil Co. No. 2-B-18 Meyer, C NE NW sec. 18-21-36. Bldg. rig.
Tide Water Oil Co. No. 1 State "G," C SE NE sec. 21-21-36. Rigging up rotary.
Continental Oil Co. No. 6-B-28 Lockhart, C NE SW sec. 28-21-36. Location.
Landreth Production Co. and Ohio Fuel Supply Co. No. 1 State "E," C SW NW sec. 22-21-36. Building derrick.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. 1,450 ft. sd. and gravel.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 20-9n-17e. Drlg. 560 ft.

Harding County

Khaay et al No. 1 De Baca, C sec. 19-20n-31e. Rng. 8¼-in. at 847 ft.; 10-in. at 250 ft.

McKinley County

S. Dysart et al No. 1 Bouton, CEL NW NE sec. 14-14n-10w. O.W.D.D.; T.D. 1,490 ft.; rmg. at 600 ft.
Seward et al No. 1 State, NE SE SE sec. 2-19n-9w. Drlg. 585 ft. in sh.
Seward et al No. 1 fee, C NW SE sec. 35-20n-9w. S.D. 437 ft. in sh.
Red Mountain O. & G. Co. No. 1 State, NE NE SW sec. 21-20n-9w. S.D. 100 ft.; (formerly Dave Stacey).
Foster & Clark No. 1 Railroad Land, NE NE NW sec. 29-20-9w. Spud to 75 ft. and S.D.
Montrose O. & G. Co. No. 1 State, NE NE sec. 28-20n-9w. R.U. Spudder.
Claude Walker No. 1 Patd. NE SW SE sec. 20-20n-9w. Ready to spud.

San Juan County

Atchison & Galloway No. 1 Ptd., C SE SE sec. 19-29n-11w. S.D. without R.U.
Continental Oil Co. No. 53 Tribal, SE SE NW sec. 2-29n-19w. R.U.
W. L. Hair No. 1 Hair, NE NW NE sec. 22-29n-11w. Drlg. 684 ft.
Jack Amenda No. 3, SW NW SW sec. 25-20n-12w. Drlg. 1,275 ft.; show of 22,000 ft. of gas at 925-65 ft.
Jack Amenda No. 4 fee, NW NE SW sec. 25-30n-12w. Drlg. 680 ft.
J. D. Cross et al No. 1 Wilson, SW SW SE sec. 17-30-11w. S.D. 810 ft.
Cross & Pool No. 1 Aztec, sec. 1-30-11w. Making wtr. shutoff at 740 ft.
Kutz Canon O. & G. Co. No. 1 Day, SW SW SW sec. 26-28-10w. T.D. 4,400 ft.; S.R. to lower 4⅝-in. to 4,100 ft.
Nick Soatter No. 1 fee, C NE SW sec. 32-21-11w. S.D. 1,780 ft.; T.A.
Southern Union Gas Co. No. 6 Government, C NW NW sec. 19-28-10w. Ready to spud.

Quay County

Quay County Dev. Co. No. 1 Wallace, SW SW SE sec. 19-9n-33e. F.R. 816 ft.; rainbows at 814 ft.; show S.W. at 775 ft.

San Miguel County

Cabra Springs O. & G. Co. No. 1 Cabra Springs ranch, SW NE NE sec. 22-12n-22e. T.D. 4,045 ft.; prep. to resume.
Cabra Springs O. & G. Co. No. 1 Jones ranch, SW SW SW sec. 31-12n-22e. T.D. 726 ft.; prep. to build standard rig to replace Fort Worth spudder.

Torrance County

45 Pet. Co. No. 1 Greenfield, C NW SW sec. 17-9-8e. Drlg. 1,635 ft.; hd. gr. L.
Bruce Frazier No. 1 Frazier, SE sec. 12-2n-8le. Drlg. 1,575 ft. sd. and L.

COLORADO

Adams County

E. M. Butler et al No. 1 Kate Edwards, NW SW NW sec. 15-3s-66w. M.I. portable rotary (first report).
Glenridge Oil Corp. No. 1 Hills, SE SE NE sec. 27-3s-64. Deepened to 4,190 ft.; cmtd. to bottom to stop caving.
Riddle Pet. Co. No. 1 Baxter, C SW sec. 2-3s-6w. S.D. 700 ft. for D.P.

Archuleta County

Wm. E. Hughes Estate No. 6 Gramps, NW NE SE sec. 24-33n-2e (unsurveyed). Bldg. road (first report).
Wm. E. Hughes Estate No. 7 Gramps, NW SE SE sec. 24-33n-2e (unsurveyed). Bldg. road (first report).
Carl D. Lindstrom No. 1 Crowley, SE SE SE sec. 3-22n-2e. M.I.M. (first report).
Oil City Pet. Co. No. 1-A Garnett, NW NE NW sec. 25-33n-2e. S.D. 1,515 ft.; top Dakota series 1,415 ft.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW), sec. 24-33n-2e. Drlg. 409 ft.
H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. Drlg. 937 ft. in dry hole.

Baca County

Paul R. Robb Pet. Corp. No. 1 Lovette, NW NW NW sec. 24-32s-48w. Drlg. to 300 ft. to set 12½-in. surface pipe.

Cheyenne County

Brittel Oil Co., Inc., No. 1 Steip, C NE NW sec. 26-12s-17. Spd. and S.D. to complete rig.

Huerfano County

Collins & Quinn No. 1 fee, C W half E half sec. 4-28s-68w. Drld. by whipstock and making new hole at 3,795 ft.; O.T.D. 4,115 ft.

Jackson Parish

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. S.D. 2,275 ft. for parts.

Jefferson County

Rainbow Oil Co. No. 1 Johnson, NE sec. 30-4s-68. Drk.
Ruby Hill O. & G. Co. No. 1 Braden, SE cor. sec. 24-4n-69. Drlg. 4,425 ft.

La Plata County

McGarr Pet. Co. No. 1 Pinton Mesa, CSL NE NE sec. 34-35n-12w. Set 10-in. at 1,310 ft.; 8¼-in. at 2,790 ft.; drlg. 2,795 ft.

Las Animas County

Mountain States Oil Corp. No. 1 Nikola, C NE SE sec. 10-34n-62w. S.D. 1,813 ft.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE sec. 7-17s-52. T.D. 1,975 ft.; running 8¼-in.; 10-in. set at 1,794 ft.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. T.D. 1,449 ft.; fshg. for parted 4½-in.

Moffat County

Chio Oil Co. No. 1 Robertson, C SW SW sec. 3-6n-92w. Location.
Texas Co. No. 7 Knowlton, NE cor. Lot 3, sec. 10-4n-91w. T.D. 4,557 ft.; Sundance at 4,503-57 ft.; swabbed 812 bbls. fluid (178 bbls. oil) in 24 hrs.; installing standard pump rig; flowing 35 B.D.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. Contracted with Perry Coon to comp.; T.D. 3,705 ft.; trying to drill by.

Park County

The South Park Oil Co. No. 1 State, the discovery well on the Hartsel structure, is underreaming the 6¼-inch pipe 60 feet off of bottom at 4,160 feet. When the well was opened up it was found that the hole had caved for 50 to 60 feet off of bottom and shut off the oil which was flowing by heads when the valve was closed. This has slowed up the lowering of the pipe, which is to be carried to the top of the pay at 4,157 feet and cemented before the core-barrel will be run to sample the sand below present total depth before drilling deeper.

South Park Oil Co. No. 1 LeBert, NE NE NW sec. 21-11s-75w. M.I. steel rig (first report).
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. T.D. 4,160 ft.; U.R. 6¼-in.

Routt County

Mid-Colo. Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. Set 8¼-in. on bottom at 2,910 ft. in Morrison; drlg. plug.

Washington County

Indian Territory Ill. Oil Co. and Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49w. M.I. rot (first report).

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Weld County

Continental Oil Co. No. 1 State Bank of Trenton, C SW NE sec. 21-8n-59w. Bldg. derrick and drlg. W.W.

Yuma County

Indian Territory Ill. Oil Co. No. 1 Strangways, C NW SW sec. 21-2s-43w. M.I. rotary equipment (first report).

WYOMING

Albany County

California Co. No. 3 Hoist, 1,650 ft. W of E line and 970 ft. N of S line, sec. 18-17n-77w. T.D. 3,295 ft.; redrlg. at 3,099 ft.

California Co. No. 1 Wilson, NW SW SW sec. 18-17n-76w. Drlg. 1,383 ft.

James Lake Oil Co. No. 1 George & Hunt, NW NE SE sec. 5-17n-75w. Bldg. derrick (first report).

Big Horn County

J. W. Bales No. 1 Parker, C SW SW sec. 22-4-89. S.D. 690 ft. for pipe.

Jean Oil Co. No. 1 Howell, Lot 63 (NW SE NE) sec. 32-55n-97w. Resuming at 1,190 ft.

Peter Evanhoff et al No. 1 McAllister, Lot 4, NW NE SE sec. 35n-87w. T.D. 2,350 ft.; C.O.

Ohio Oil Co. No. 1 Orson Vail, SW NW NE sec. 23-56n-97w. Rig; W.O. tools from No. 4 Byron Union.

Ohio Oil Co. No. 1 Vail, SW NW NE sec. 23-56n-97w. R.U. boilers.

Ohio Oil Co. No. 1 Robert Till, C SE SW sec. 24-56n-97w. Drlg. 2,873 ft. in shale.

Ohio Oil Co. No. 4 Byron Union, SW SW NE sec. 22-56-97. T.D. 5,735 ft.; Embar 5,587-5,710 ft.; top Tensleep at 5,710 ft.; sat. in top followed by water; P.B. to 5,719 ft.; milling on cut tubing at bottom.

Montana-Wyoming Oil Co. No. 1 Allen, 270 ft. from N line, 930 ft. from E line, Lot 52 (SE NW SE) sec. 32-56n-97w. T.D. 3,835 ft.; well out of control and on fire; contract let to Rocky Mountain Drlg. Co. for relief well, 420 ft. to east.

Montana-Wyoming Oil Co. No. 1-X Allen, SW cor. Lot 52, sec. 18-56n-97w. R.U. to drill relief well for No. 1 Allen, 420 ft. to west.

Peay Oil Co. No. 1 Denio, Tract 43-C, sec. 15-55n-97w. T.D. 3,890 ft.; swbg. to locate water leak in pipe.

J. H. Shaffer No. 1 Keachie, C SW SW sec. 5-49-61. T.D. 1,450 ft.; sdtrkg. tools at 1,366 ft.

Stock Oil Co. No. 1 Yates, CSL SW NE sec. 33-56n-97w. Drlg. 1,200 ft.; cmtd. 12½-in. at 502 ft. with 300 sacks.

W. O. Taylor et al No. 1 Hoskins, Lot 5 (SE SE) sec. 25-56n-97w. T.D. 5,368 ft.; 6¼-in. cmtd. 5,252 ft.; W.O.C.

Campbell County

G. J. Sherin et al No. 1 Rhodes, NE SE C sec. 24-49n-74w. Drk. up; sump and reservoir comp. (cor. loc.).

Carbon County

General Pet. Corp. No. 1 Union Pacific, SW NW sec. 5-19n-83w. Drlg. 125 ft.

Ohio Oil Co. and California Co. No. 2 Union Pacific, C NE NE sec. 35-21n-79w. Drlg. 3,082 ft.

Ohio Oil Co. No. 7 Diamond Cattle, N½ sec. 35-20n-78w. R.U.R. (first report).

Ohio Oil Co. and California Co. No. 3 Union Pacific, C NE SE sec. 23-21n-79w. Drlg. 1,342 ft.

Ohio Oil Co. No. 9 H. & C., SW SW SW sec. 35-20n-78w. Coring 2,616 ft. to determine Sundance section; water in first Sundance; top at 3,436 ft.

Ohio Oil Co. No. 1 Dixon, NE NE SE sec. 34-20n-78w. Drlg. 3,240 ft.

Ohio Oil Co. No. 2 Dixon, SE NE SE sec. 34-20n-78w. R.U. to deepen old well from 3,094 ft. to Sundance.

Union Oil Co. of California and Mutual Oil Synd. No. 1 Union Pacific, 1,890 ft. from E line and 1,320 ft. from S line, sec. 1-18-78w. S.D. 4,440 ft.; M.I. 5-in. D.S. to resume.

Converse County

John Ackert No. 1 Daniels, SW SW NE sec. 17-32-71. S.D. 4,004 ft.

Chadron-Osage Oil Co. No. 1 State, SW SW SW sec. 16-32n-69w. Drlg. 1,836 ft.

J. A. Olson No. 1 Reese, C NE SE sec. 10-32n-65w. M.I.M. (first report).

Fremont County

Tropic Oil Co. No. 1 Government, C SE SW sec. 34-27n-90w. T.D. 2,550 ft.; prep. to run 4½-in. to top of Dakota.

Sinclair-Wyoming Oil Co. No. 1 Keisch, NE SW sec. 1-33n-92w. M.I.M.

Hot Springs County

California Exploration Co. No. 2 Government, NW SW NW sec. 4-44-96. T.D. 4,245 ft.; P.B. to 4,165 ft.; shot 80 qts.; C.O.

Ohio Oil Co. No. 73 Mill Iron Cattle Co., NE SW SE sec. 19-4n-98w. Cmtd. 12½-in. at 77 ft.; drlg. 1,125 ft.

Stanolind O. & G. Co. No. 20 State-Ridgely, SE NE SE sec. 19-46n-98w. T.D. 3,931 ft.; top of Embar 3,908 ft.; 6⅝-in. cmtd. 3,913 ft.; R.U.S.T.

Lincoln County

Senrab Oil Corp. No. 3 Government, CSL SE NW sec. 10-26n-113w. S.D. 1,020 ft.

Natrona County

Empire State Oil Co. No. 15, NW SE NE sec. 11-3n-83w. T.D. 1,440 ft.; set 6¼-in. at 1,336 ft.; W.O.C. and R.U. pumping equip.

Niobrara County

Argo Oil Co. No. 7 Elliott, C NE NW sec. 5-35n-65w. Csg. 3,893 ft.

Black Hills Ref. Co. No. 1 Mills Est., C SW NW sec. 27-36n-64w. Spudded and S.D. account of weather.

Continental Oil Co. No. 4 Joss, 90 ft. W of C SW NE sec. 6-35n-65w. Drlg. 1,213 ft.; surf. pipe at 456 ft.

Continental Oil Co. No. 6 Rohlff, C SW SW sec. 32-36n-65w. Drlg. 2,768 ft.

Lewis Gokel No. 1, SW NE sec. 31-35n-62w. Drlg. 364 ft.

J. H. Huber Co. No. 1 Jones, NE SE NW sec. 6-25n-65w. T.D. 4,096 ft.; P.B. to 4,032 ft.; pumped wtr. only for 3 days; made 350 bbls. of fluid fourth day of which 280 bbls. was oil; testing.

Ohio Oil Co. No. 3 Agnes Rohlff, C SE NE sec. 32-36n-65w. T.D. 3,958 ft. in top red beds; testing; top first Sundance 3,736 ft.; second Sundance 3,768 ft.; third Sundance 3,879 ft.; 7-in. at 3,868 ft.

Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. T.D. 3,711 ft.; top gas sand in Sundance 3,702 ft.; 8⅝-in. cmtd. 3,711 ft.; prob. core and test before D.D.

Ohio Oil Co. No. 3 Richards & Comstock, C NE SW sec. 32-36n-65w. Spdg.

S & H. Dev. Co. No. 1-A Olinger, SE NE NW sec. 1-36-63. T.D. 1,674 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55n-85w. T.D. 3,050 ft.; rec. lost pipe and resuming.

Sweetwater County

The Wilmington Oil Co. No. 1 fee, NW cor. section 18-26-98, Red Desert district, is reported plugged and abandoned at 3,165 feet. It drilled to the Mesa Verde at 3,115 feet in 1934 and shut down until last fall when it was deepened 50 feet and again shut down.

Weston County

Conway Oil Corp. No. 1, SE SE NE sec. 7-41n-60. Tools sdtrkd.; drlg. 3,240 ft. in red beds.

H. D. Wiltse No. 9, NW NW NE sec. 17-46n-63w. Drlg. 200 ft.

Uinta County

Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118w. Resumed at 1,000 ft.; (formerly Pacific Oil Co.).

Intermountain Pet. Corp. of Utah No. 1 Union Pacific-zayes, SW NW SW sec. 24-19n-118w. Drlg. 1,575 ft.

W. D. Marshall No. 1 Government, NW SW SE sec. 12-15n-118w. S.D. 1,260 ft.

Washakie County

Ariton & Doyle No. 1 Government, SW SW SE sec. 29-48-91w. S.D. 1,115 ft.

Wyoming O. & G. Co. No. 2 Government, SW SW SW sec. 31-48-90. T.D. 1,404 ft.; (cor.); fsg. for tools.

MONTANA

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. Drlg. 3,300 ft.

Fallon County

It will probably be about two weeks before a capacity test will be made at the discovery well drilled by the Montana-Dakota Utilities Co. in the NE NW section 17-4n-62 on the Baker-Glendive (Cedar Creek) anticline. A string of 6⅝-inch A.P.I. casing has been ordered and will be landed and cemented at approximately 6,740 feet when received. It will then be necessary to go through the usual routine of drilling in and completing the well. It is reported oil has been found as contact between Quadrant of Pennsylvanian age and the Madison (Mississippian) penetrated at 6,747-97 feet. The oil rose 5,000 feet in the hole in about 30 minutes. It is a black crude testing 27 gravity. On a drill stem test it showed for approximately 400 bbls. a day. Pipe will be run and the pay acidized before it is given a production test and if acid yields expected results it may prove to be a very large well. The discovery is located on the Little Beaver dome, one of a number of superimposed domes on the long anticline. Two of these south of the discovery are in South Dakota. The company will drill its next well on the Cabin Creek dome about 15 miles north of the town of Baker. There are around 150 producing wells in the Baker-Glendive district at the northern end of the fold from which about 35,000,000 feet a day is being withdrawn. These wells, which encounter gas at a shallow depth in the Judith Basin formation have an estimated capacity of 900,000,000 feet per day. There is an enormous quantity of land open to leasing along the 80-mile fold much of which is on the 12 known domes. The shallow wells in the Judith Basin find gas at around 800 feet and the second horizon, the Eagle sandstone, is encountered at 1,200 to 1,400 feet. Some of the wells have an initial capacity as high as 28,000,000 feet a day. The discovery well on Little Beaver is the only test drilled to the horizon in which the pay was found. John H. Wilson's Colorado Geophysical Corp., which spotted the test after making a seismograph survey, also shot the Cabin Creek dome where the next test will be drilled.

Carbon County

Bailey Round Butte Oil Co. No. 1, NW NE SE sec. 2-6s-23e. T.D. 1,551 ft.; chg. over to rotary.

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. Drlg. 2,100 ft.

Judith Operating Co. No. 2 Government, NW NE sec. 35-22n-17e. Drlg. 666 ft.

H. C. Rowland No. 3 Government, CEL NE SW sec. 18-17n-24e. Spdg. 50 ft.

Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-21-18e. Drlg. 576 ft.

Glacier County

Three wells were completed in Cut Bank, two of them at the extreme southern end of the pool, one of which extended the proven area about half a mile to the southwest, and the other at the northwestern end of the pool. Texas Co. No. 1 Marie Jones, C NW SW section 6-33n-5w, which extends the pool half a mile to the southwest, was completed at 2,920 feet and swabbed 123 bbls. first 12 hours after a shot from the pay at 2,900-10 feet. The same company No. 1-B Tribal-122, Lot 4, SE SW SW section 32-33-5w, swabbed 140 bbls. first nine hours at a total depth of 2,778 feet.

Santa Rita Oil & Gas Co. No. 7 Tribal, C S half NE section 16-35-6w, has 1,300 feet of oil in the hole from the Cut Bank at 2,985-3,008 feet. The total depth is 3,018 feet and the elevation is 3,887 feet. No

(Continued on Page 75)

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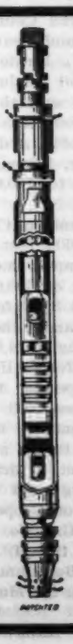

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Eastern Field Report

ORISKANY SAND YIELDS GOOD GASSER IN KANAWHA COUNTY

By STAFF CORRESPONDENT

PITTSBURGH, Pa., May 2.—The Columbian Carbon Co. completed another gas well in Kanawha County, West Virginia, and also one dry hole. In Elk district, No. 3 G. and D. Copenhaver was completed at a total depth of 5,097 feet, and it gauges 3,519,360 feet a day from the Oriskany sand. It is located about 2,000 feet east of the same company's No. 1 on this farm and on Lick Branch, a tributary of Little Sandy Creek.

More important, however, is the dry hole. West of Coopers Creek in this district, this company drilled a test on the M. M. Robertson farm through the Oriskany sand and it is dry. The Corniferous lime was at 4,906-5,010 feet and the Oriskany sand at 5,010-5,042 feet. The tools are at present at 5,042 feet. This does not condemn the west side of Coopers Creek as there are two other tests drilling, one on the W. H. Baxter and others lease, which is about due in, and the other south of the Elk River on the Elkland Improvement Co.'s lease.

The test of W. O. Zeibold and others on the D. A. Griffith farm on Boardtree Run of Grapevine Creek in Poca district, Kanawha County, which was reported last week as good for 3,345,000 feet a day natural from the Oriskany sand at 4,869 feet has drilled itself in and has improved the volume. It is now gauged at 7,000,000 feet a day with a rock pressure at the end of four hours of 1,860 pounds. As this test is 5 miles north of the Copenhaver farm, the most northern of the Oriskany sand gas wells, the increase in volume with the large rock pressure, improves the Milliken anticline.

In Elk district, Kanawha County, S. B. Avis, trustee, shot and cleaned out the test on the W. L. Burdette, which was the original oil producer from the Oriskany sand, and there was no increase in the production. It is still making about 2 bbls. a day. The gas volume, however, increased from 30,000 feet a day to 180,000 feet a day.

In this district, the Columbian Carbon Co. is drilling at 3,600 feet in the test on the Elkland Improvement Co. There was a showing of 300,000 feet of gas in the Shale at 3,500 feet. On the W. H. Baxter and others farm, their test is drilling at 4,695 feet. The top of the Corniferous lime was at 4,630 feet. Deepening the W. L. Burdette Shale gas well to the Oriskany sand, this company has reached 4,911 feet. V. C. Smith and others are down 5,493 feet in drilling down to the Newburg sand on the island at the mouth of Coopers Creek. The Yoak Oil & Gas Co. is drilling at 1,050 feet on the H. T. and J. H. Goshorn farm. Benedum & Trees are down 910 feet on the Mary C. Wingfield No. 2.

In Malden district, in Kanawha County, the South Penn Oil Co. had to shut down the second test on the Katherine C. Scott farm almost on top of the Oriskany sand and install a new line. In this district, Godfrey L. Cabot, Inc., has made a location for No. 3 on the Nellie B. Thompkins farm located on Burning Springs Run 2,075.2 feet east, 17 degrees south of the No. 1. The No. 2 is drilling at 835 feet. This operator is down 4,200 feet in the test on the W. D. Lewis farm and 2,910 feet in No. 9 on the Campbells Creek Coal Co. lease and 1,388 feet in No. 10. This operator is also building a rig for a second deep test on the William Tompkins heirs farm or the lower end of the known pool on the Warfield anticline. The United Carbon Co. has rigged up and is ready to start the test on the J. Q. Dickinson farm.

In Loudin district, Godfrey L. Cabot, Inc., has reached a depth of 1,714 feet on the Kanawha Land Co. second test. United Carbon Co. is down 4,937 feet on the C. C. Dickinson farm.

There were 20 completions in the lower eastern fields composed of four dry holes, 10 gas wells, and six producers with an initial production of 116 bbls. Southeast Ohio presented some interesting tests.

SOUTHEAST OHIO

Completions were scattered in Southeast Ohio, seven counties being represented. In Ashland County the Preston Oil Co. completed a test on the Floyd J. Talbott farm in section 17, Jackson Township, in the Lime at a depth of 2,650 feet. It produced 20 bbls. naturally the first day.

In Licking County, the Pure Oil Co. completed No. 7 H. E. Loughman in the SW section 1, Hopewell Township. It is a Clinton sand well at a depth of 3,139 feet and produced 65 bbls. the first day after a shot.

In Lorain County, the Ohio Fuel Gas Co. completed a test on the J. Kolbalka farm in section 13, Eaton Township, in the Lime at a depth of 2,890 feet. It is a gas well gauging 700,000 feet a day.

In Medina County, a successful deep test was completed. In section 14, Liverpool Township, Ed Obermiller completed No. 1 on the H. F. Rombach farm in the Lime at 2,631 feet. It is a gas well gauging 1,500,000 feet a day.

In Monroe County, John Lumbatis and others completed a second well on the Clyde Robinson farm, NE section 9, Franklin Township, in the Squaw sand at 1,532 feet. It produced 3 bbls. the first day, naturally.

In Noble County, SE half of section 13, Buffalo Township, Thurman L. Rich and others completed a test on the Daniel H. Murphy farm in the Berea grit at a depth of 1,452 feet. It is a gas well gauging 240,000 feet a day. There was no showing of oil. It is in the old Chaseville pool.

In Perry County the Mid East Gas Co. drilled a test on the L. A. Paxton farm in SE section 31, Madison Township, through the Medina sand to 3,263 feet. Both the Clinton and Medina sands were dry and the test is being abandoned.

SOUTHWEST PENNSYLVANIA

In Peters Township, Washington County, Pennsylvania, R. M. Duden and others (formerly reported as Amon and Kaufman) completed a test on the Parks heirs farm in the Fifty-foot sand at a total depth of 2,237 feet. The casing filled up 1,000 feet and it is estimated good for 20 bbls. a day, initial.

In Morris Township, Washington County, John R. Conklin and others filled the No. 1 on the H. Sanders farm deeper to the Bayard sand and it was dry. The Fifth sand, which had a small oil trace, was at 3,172-3,211 feet with the Bayard sand at 3,301-10 feet.

In Greene County, the Carnegie Natural Gas Co. deepened No. 1 Lee Wade in Perry Township to 3,341 feet. The Fifth sand was at 3,175-3,200 feet; the Bayard sand at 3,282-98 feet; the Bayard Stray sand at 3,324, with oil showing at 3,325-28 feet. It is good for about 1½ bbls. a day.

In Richhill Township, Greene County, Burleigh Wright and others completed the test on the George Grim farm at 2,660 feet, the Gordon sand. The Fifty-foot sand was at 2,413-35 feet, with gas at 2,433 feet. The Gordon sand was at 2,578-95 feet, with gas at 2,583 feet. The total gauge was 440,000 feet a day.

In Aleppo Township, Greene County, Manufacturers Light & Heat Co. has made a location for a test on the Lucy McCracken farm of 85 acres. In Richhill Township, west of Graysville, the Natural Gas Co. of West Virginia has a location for a second test on the J. H. Braddock farm. On Fish Creek in Springhill Township, the Dunn Mar Oil Co. is building a rig for No. 4 on the David Hostutler farm. The Equitable Gas Co. is down 2,910 feet deepening No. 1 on the Fannie Berdine farm in Freeport Borough. Drilling commenced at 2,852 feet.

In Franklin Township, Greene County, the Wayneburg Home Gas Co. is drilling at 2,725 feet in deepening No. 1 on the W. P. Guthrie farm. In Center Township, the South Penn Oil Co. is down 1,300 feet on the Charles Harvey farm.

In Amwell Township, Washington County, the Union Gasoline & Oil Corp. is drilling in the Fifth or productive sand in the test on the Thomas Beabout farm. The top of the sand was at 3,096 feet with oil showing at 3,105 feet and oil and gas at 3,112 feet. On the Hiram VanKirk farm (now Marion C. and Nettie Johnson tract) this company is drilling at 1,060 feet. The South Penn Oil Co. is down 795 feet on the Anna A. Lowery farm and 175 feet on the J. Q. Zimmerman farm. The rig is completed on the Hazel M. Seese farm.

Deep Tests

The deep test of Norwood Johnston and others on the James McBurney farm in Pleasant Township, Washington County, south of Hickory, is drilling at 2,470 feet.

In South Union Township, Fayette County, the test of William Snee and others on the Summit Hotel property on Chestnut Ridge is progressing very slowly. Casing has been run and the tools are below 6,220 feet.

WEST VIRGINIA

One producer was completed in West Virginia. In Henry district, Clay County, the Virginian Gasoline & Oil Corp. completed No. 35 on the Brown, Swan, Goshorn & Geary tract in the Injun sand at 1,992 feet. It is good for 7 bbls. a day. No. 34 should be completed in a week.

On Jordon Creek in Big Sandy district, Kanawha County, this company cleaned out but did not shoot the No. 6 on the Sophronia Young farm and increased production from 10 to 20 bbls. a day. On this stream in the same district, the South Penn Oil Co. No. 2 on the F. M. Young farm increased from 1 to 12 bbls. a day, naturally.

Gas Wells

Cabell County was again active, four wells being completed. In McComas district, the Sue Gas Co. completed a second test on the Gill estate at a depth of 1,302 feet, as a gas well gauging 4,444,500 feet a day. The Big Lime was at 1,080-1,242 feet; the Big Injun sand at 1,295 feet, with the gas showing at 1,299-1,302 feet. W. C. Kingery and others also completed a fair well in this district as the Pratt heirs No. 4. It gauges 3,465,000 feet a day from the Injun sand, the top of which was at 1,408 feet, with the gas showing at 1,411-13 feet.

In this district, the Homer Gas Co. completed a test on the Homer Woodall farm at 3,140 feet. It is a gas well gauging 232,000 feet a day. The Big Lime was at 1,335-1,500 feet; the Big Injun sand, 1,562-1,625 feet; the Berea sand at 2,105-15 feet; the Brown shale at 2,900-3,140 feet, with gas at 2,923-3,100 feet. R. H. Adkins completed a test on the Demma Morrison farm in the Big Lime at a depth of 1,415 feet. It is a gas well gauging 652,000 feet a day. The Big Lime was at 1,246-1,415 feet with the gas showing at 1,316-51 feet.

Oklahoma Operations

By
DAL DALRYMPLE

NEW CAPITOL AREA OIL WELL; MORE FITTS WELLS FIND PAY

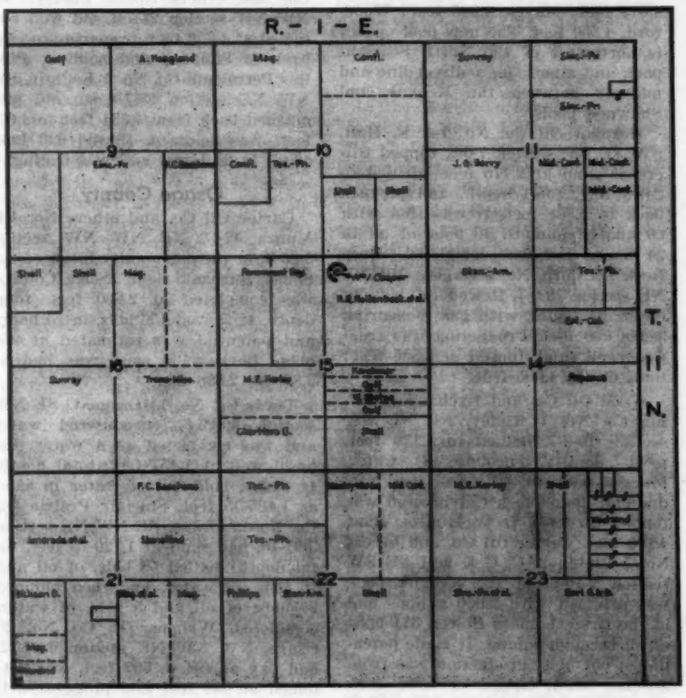
The capitol extension area of the Oklahoma City field continued to overshadow all other development in Oklahoma the past week, but several important tests in the southern areas were rapidly nearing decisions and were being closely watched by oil men. One of the more interesting of the southern wells was the Sinclair-Prairie Oil Co. No. 1 Stockton, SE SE SW section 26-6s-2w, near Oswalt in Love County. It was drilling below 8,066 feet in Simpson dense lime with shale breaks. It based the Pennsylvanian at 7,963 feet, which also was top of the Simpson formation, cutting out the Mississippian, Devonian and Silurian formations and part of the Ordovician. This wildcat missed from 1,000 to 1,500 feet of formation which was found in the Carter Oil Co. and others No. 1 Williams, deep producer in the Fox field to the north in Carter County.

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. No. 1 Westheimer & Daube, SW SE SW section 27-6s-2e, another important Love County wildcat, plugged back from total depth of 7,363 feet to 6,300 feet, ran tubing and was to acidize. It was to be tested up to 5,000 feet. Several lease trades were reported in Love County during the week, with Gulf Oil Corp., the Texas Co., Carter Oil Co., Sinclair Prairie Oil Co. and Power Oil Co. taking acreage.

Considerable leasing also was reported in other southern sectors, notably in Jefferson and Tillman Counties. Gulf Oil Corp. recorded additional leases in Tillman County, and buyers in Jefferson County were Marathon Oil Co., Carter Oil Co., Texas Co., Sinclair Prairie Oil Co., Mid-Continent Petroleum Corp. and Gulf Oil Corp. The principal strike in southwestern Oklahoma is in the Tipton area, south of Humphreys in Jackson County. Gulf Oil Corp. was testing its sixth producer in the area at No. 1 Shirley, NW NE NE section 6-1s-19w. The well was averaging 500 to 575 bbls. of oil a day from total depth of 2,628 feet in Cisco lime. It may be deepened before completion.

The twenty-second producer in the capitol extension area at Oklahoma City was given a potential rating of 19,022.40 bbls. daily on natural flow as the week ended. It was the Barnsdall Oil Co. and Fairfax Oil Co. No. 5 Bracht, in Block 18, Fairfax Addition, in SW section 23-12-3w. It is on the extreme southeast edge of the proven area of the extension district. The same operators No. 1 Banks-Geyer, SE SW SE section 15-12-3w, another important key test one-fourth of a mile northwest of production, was due for completion this week. Operators were preparing to drill plugs after cementing casing at 6,407 feet, total depth 6,429 feet. It had about 12 feet of saturated Wilcox sand. Several other tests in the extension district are nearing the producing sands. About 1½ miles northwest of production, Don Oil Co. No. 1 Berlowitz, SE SW NE section 9-12-3w, on Block 12 of Leborn Addition, on Lincoln Boulevard, is a location. Some observers believe it may be on a separate structure from the city field proper. Other new work in the district follows.

H. R. Hollenback and others No. 1 Cooper, NW NW NE section 15-11-1e, wildcat in the Newalla area of southeastern Oklahoma County, was drilling below 5,812 feet and was being watched with considerable interest. It topped Oswego lime at 5,435 feet and in cores from 5,709 to 5,726 feet recovered 17 feet of cherty shale.



Map of Newalla area, southeastern Oklahoma County, Oklahoma, where Hollenback and others No. 1 Cooper, wildcat, is running high
(Mid-Continent Map Co., Tulsa, Okla.)

Oklahoma County

The following new work was reported in the Oklahoma City field: Empire Oil & Refining Co. No. 1 Robb, SE SW NW SE section 15-12-3w, cellar; Barnsdall Oil Co. and Bay Oil Corp. No. 4 Edwards, SW NW SE SE section 15-12-3w, digging cellar; same operators' No. 5 Edwards, NW NW SE SE section 15-12-3w, location; British-American Oil Co. No. 3 Piersol, SE NE SE SE section 22-12-32, an old well, waiting on tools to drill deeper; same operators' No. 4 Gast Heights, C E half NE SW NW section 26-12-3w, rig; British-American Oil Co. and Phillips Petroleum Co. No. 1 Baird, SW NW NE NW section 26-12-3w, rig; Skelly Oil Co. No. 1 Capitol Park, NE SE NE SW section 22-12-3w, location; Larkins & Warr No. 1 Nichols, NE cor. section 27-12-3w, digging cellar.

Pontotoc County

Only three wells in the Fitts field of southeastern Pontotoc County were completed. E. H. Moore and others No. 3-A Atkins, SW NW NW section 32-2-7, topped Wilcox sand at 4,350 feet, was bottomed at 4,378 feet and made potential of 5,445 bbls. of oil, with 2,068,000 feet of gas. Bottom hole pressure was 1,713 pounds. Bromide was topped at 3,840 feet; McLish, 4,050 feet; Simpson dense, 4,275 feet.

H. L. Blackstock and J. J. Deaner No. 1 Moody, NE cor. section 27-2-7, made potential of 3,886 bbls. of oil, gas gauging 2,310,000 feet. Production was from Viola lime, topped at 3,875 feet, and Bromide, topped at 4,160 feet; total depth, 4,270 feet. After acidizing with 10,000 gallons, it flowed 1,064 bbls. in one hour and 54 minutes through casing and 230 bbls. in one hour through tubing. Samedan Oil Co. No. 2-A Holkum, NE SW NE section 27-2-7, topped Glencrease sand at 1,135 feet; drilled to 1,219 feet, total depth, produced an estimated 12,000,000 feet of gas and was completed.

The following new work was reported in Pontotoc County: H. L. Blackstock and others No. 3 Daniels, NE SE SW section 21-2-7, location: Boettcher Oil & Gas Co. No. 3 Burris, C N half NW NW section 27-2-7, building rig; Carter Oil Co. No. 5 Harden, SE NE SW section 30-2-7, old well being deepened, rig; same operator's No. 18 Richards, SE cor. section 30-2-7, location; Senora Oil Co. No. 3 Skirvin, SW NE SW section 3-4-6, machine.

Fleetborn & Simpson No. 6 Woolley, NE NE SW section 27-2-7, topped Bromide at 3,900 feet; McLish, 4,110 feet; total depth, 4,276 feet. It flowed 45 bbls. of oil in the first 15 minutes through tubing. Magnolia Petroleum Co. No. 4 Metropolitan Life, NW NE SW section 27-2-7, was acidized with 2,000 gallons and flowed 502 bbls. of oil the first hour through casing and 168 bbls. the second hour through tubing. Top of Bromide was 3,930 feet; McLish 4,140 feet; total depth, 4,275 feet. Bishop Oil Co. No. 3 Simpson, SW NW NW section 38-2-7, topped Viola lime at 3,250 feet; Bromide, 4,055 feet; total depth, 4,100 feet. After acid treatment with 7,000 gallons, it flowed 451 bbls. of oil in three hours through tubing, and was given potential rating of 2,605 bbls. Later, while drilling deeper at 4,204 feet, it flowed 175 bbls. in eight hours. E. H. Moore and others No. 7 Mack, NW SE SE section 28-2-7, topped Bromide at 3,860 feet; McLish, 4,055 feet; and at 4,270 feet, total depth, it was acidized with 8,000 gallons and was waiting. It previously was acidized with 6,000 gallons at 3,877 feet, and flowed 140 bbls. in one-half hour. It made several other flows and gas gauged as high as 3,500,000 feet. Skelly Oil Co. No. 8 Park College, NE SW NE section 28-2-7, flowed 934 bbls. of oil gross through tubing in the first five hours after acidizing with 10,000 gallons. Top of Bromide was 3,960 feet; McLish, 4,170 feet; total depth, 4,300 feet. Same operator's No. 9 Park College, SE NW NE section 28-2-7, topped Bromide at 4,015 feet; McLish, 4,245 feet, and was bottomed at 4,306 feet. After acidizing with 10,000 gallons, it flowed 915 bbls. of oil gross through tubing in five hours, and made potential of 4,077 bbls. Gas measured 2,753,000 feet, with bottom hole pressure of 1,837 feet. E. H. Moore and others No. 5 McKoy, SE cor. section 29-2-7, flowed 546 bbls. in three hours through equipment at 4,340 feet. Gas gauged 3,900,000 feet. Top of Bromide was 3,915 feet; McLish, 4,155 feet. Same operators' No. 11 Wirick, SE SW SE section 29-2-7, flowed 1,345 bbls. through equipment in four hours, at

4,335 feet. Bromide was topped at 3,900 feet; McLish, 4,178 feet; Wilcox, 4,330 feet.

Estimated Production

Estimated daily average production of Oklahoma for the week ending May 2 and for the preceding week is as follows:

	Barrels	
	May 2	Apr. 25
Allen	7,875	7,675
Asher-West Asher	900	875
Burbank	7,750	7,650
South Burbank	14,500	14,750
Balance Osage	23,800	23,750
Blackwell district	4,450	4,500
Bristow-Slick	8,500	8,500
Chandler	4,225	4,125
Crescent	5,275	5,350
Cromwell	3,800	3,7 0
Cushing-Shamrock	11,750	11,600
Duncan district	4,150	4,050
Edmond	13,425	12,950
Fish	10,275	10,575
Fitts	52,675	51,325
Gray	1,675	1,700
Graham	4,250	4,200
Healdton	9,275	9,175
Hewitt	4,550	4,500
Holdenville	1,100	1,075
Keokuk	5,275	5,075
Konawa	1,800	1,625
Lucien	13,250	13,225
Marshall-Lovell	975	975
Oklahoma City	121,200	149,300
Olympic	6,525	6,200
Papoose	1,050	1,075
Polo	3,725	3,750
Sasakwa and townsite	3,375	3,475
Sholem-Alechem	3,800	3,700
Seminole field:		
Bowlegs	13,975	14,175
Carr City	7,325	7,175
Earlsboro	7,650	7,700
South Earlsboro	925	1,000
East Earlsboro	11,075	11,100
Little River	12,950	13,000
East Little River	1,175	1,125
Maud	1,000	975
Mission	2,400	2,550
Seminole	10,900	11,425
East Seminole	2,250	2,550
Searight	6,025	6,225
Total Seminole	77,750	79,000
St. Louis-Pearson	26,150	25,900
Tatums	3,500	3,500
Tonkawa-Garber-Thomas	5,500	5,600
Wewoka	3,825	3,775
Yale-Jennings	4,100	4,100
Other pools	55,000	54,750
Total Oklahoma	532,000	557,100

Hughes County

Three new producers were completed in the Olympic pool of Hughes County. Carter Oil Co. No. 3 Hampton, SW NE NE section 1-9-8, flowed 250 bbls. of oil in 14 hours through casing, after shot with 65 quarts. Top of Senora sand was 1,673 feet; total depth, 1,728 feet. Mid-Continent Petroleum Corp. No. 5 Hampton, SE SW NE section 1-9-8, topped Senora sand at 1,650 feet, and was bottomed at 1,712 feet. After a 60-quart shot it flowed 317 bbls. in 12 hours. Sinclair Prairie Oil Co. No. 9 Oliphant, NW NE SE section 1-9-8, flowed 325 bbls. through casing in 11 hours. It encountered Senora sand at 1,637 feet, was drilled to 1,694 feet, total depth, and shot with 60 quarts.

New work in Hughes County: Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 3 Harris "C," SE NE NW section 8-6-8, cellar and pits; Manahan Oil Co. and others No. 7 Oliphant "C," NE NW SW section 1-9-8, cellar; Mid-Continent Petroleum Corp. No. 6 Hampton, NE SW NE section 1-9-8, location; Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 2 Kirby, SW NW NW section 6-9-9, cellar; Ripps Oil & Supply Co. No. 8 Turner, NE NE NW section 4-9-9, old well, rigging up standard tools to deepen.

Lincoln County

Magnolia Petroleum Co. No. 3 Ross, SW SE SE section 2-14-3, an old well in the Chandler area of Lincoln County, was plugged back from 5,013 feet to 4,230 feet. After casing was ripped at 4,200-30 feet, it was shot with 30 quarts and flowed an average of 174 bbls. of oil through tubing in 24 hours. Production was from the Skinner sand.

The only new test in Lincoln County was the Slick-Urschel Oil Co. and Tide Water Oil Co. No. 1 Ransin, cellar and pits.

Okfuskee County

No completions were reported in Okfuskee County, and work was started at only one new test. It was George Manahan and others No. 5 Dalton, SW SW SE section 36-10-8, in the Okfuskee County extension of the Olympic pool, which was rigging up rotary.

Seminole County

Amerada Petroleum Corp. and others No. 1 Community Stout, C NE NE SW section 3-10-5, wildcat in northwestern Seminole County, flowed 682 bbls. of oil through tubing in 18 hours and was completed. Hunton lime, the producing formation, was topped at 4,421 feet; total depth, 4,438 feet. Other tops were: Calvin, 2,345 feet; Booch, 4,030 feet; Caney, 4,075 feet; Mayes, 4,205 feet; Woodford, 4,350 feet. The new pool opener is northwest of the North Searight pool, and almost on a direct line and midway between the Keokuk and Shawnee pools.

Horman Oil Co. No. 1-A F. Hall, SW SE NE section 7-6-8, topped Gilcrease sand at 2,776 feet; drilled to 2,908 feet, total depth, and plugged back to 2,808 feet. It was shot with 20 quarts, pumped 40 bbls. of oil in 24 hours and was completed. Deep Rock Oil Corp. No. 2 Hagler, NW SE NE section 19-9-7, flowed 740 bbls. of oil in 24 hours, with gas measuring 38,000,000 feet. Production was from Cromwell sand, topped at 3,505 feet; total depth, 4,085 feet.

Wood Oil Co. and Exchange Drilling Co. No. 1 Ripley, NE NE SW section 19-9-7, drilled to 4,136 feet, total depth; encountered water, plugged back to 3,670 feet, and was dry and abandoned. Calvin sand was topped at 2,458 feet; Hunton lime, 4,100 feet. Carter Oil Co. and others No. 5 Pipkin 28-C, C E half SE SW section 2-10-6, in the Keokuk pool, was acidized with 2,000 gallons and in the first 11 hours flowed 311 bbls. of oil through tubing. It made potential of 651 bbls. Production was from Misener sand, topped at 4,125 feet, and Hunton lime, topped at 4,146 feet; total depth, 4,154 feet.

New work in Seminole County: Tom Phillips and Kimron Drilling Co. No. 1 Cheparney, SE SE NW section 7-6-7, cellar and pits; Atlantic Oil Producing Co. and others No. 2 Patterson, SE SW NE section 8-6-7, location; Magnolia Petroleum Co. No. 1 M. Cudjo, NE cor. section 24-7-6, old well drilling deeper, fishing for tools at 3,165 feet; Mid-Continent Petroleum Corp. No. 1 W. R. Block, C E half NE NE section 15-10-6, building rig; Gulf Oil Corp. and others No. 2 Scott 43-C, C E half SE NW section 11-10-6, old well, preparing to shoot and deepen; Carter Oil Co. and others No. 3 Aldridge 28-C, C N half SE NW section 35-11-6, building rig.

Pottawatomie County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 J. W. Rushing, SE SE SW section 32-11-4, is the newest completion in the Shawnee pool of Pottawatomie County. It topped Earlsboro sand at 4,399 feet, was bottomed at 4,449 feet, and flowed 432 bbls. of oil in 24 hours through casing. Gas measured 6,000,000 feet.

Gulf Oil Corp. No. 1 Wise, SE NW NE section 13-7-4, in the St. Louis district, swabbed 1,436 bbls. of oil in 24 hours and was completed. Production was from Simpson Dolomite, topped at 3,968 feet, and Wilcox sand, found at 4,103 feet; total depth, 4,118 feet. Mid-Texas Petroleum Co. No. 1 Brandenburg, SE SE NW section 21-7-4, an old well, was deepened from 3,985 feet to 4,184 feet, was acidized and pumped 100 bbls. of oil and 50 bbls. of water in 24 hours, completed. Simpson Dolomite, the producing horizon, was had at 4,172-84 feet. Phillips Petroleum Co. No. 2 Booze, NE NE SE section 9-7-4, was plugged back from 3,763 feet to 3,546 feet and recompleted. After a shot at 3,496-3,505 feet, it flowed 226 bbls. of oil in 24 hours.

The following new work in Pottawatomie County was reported: Atlantic Oil & Refining Co. No. 1 Milburn, NE NW NW section 15-7-4, old well, building rig to deepen; Texas Co. and others No. 3 Cherry, NE NW NW section 25-7-4, old well bottomed at 4,332 feet, preparing to plug back to Simpson and acidize; Phillips Petroleum Co. No. 1 LeClair, SW NW NE section 23-7-4, an old well plugged back from 4,334 feet to 4,075 feet, was acidized, flowed 643 bbls. of oil in 24 hours and was testing.

Osage County

Carter Oil Co. and others No. 4-D Munza 42-C, NE NW NW section 2-25-6, in the community block of the South Burbank field, Osage County, was completed at 2,890 feet, total depth. It flowed 156 bbls. in 15 hours and potential was estimated at 250 bbls. Bartlesville sand was had at 2,808 to 2,888 feet.

Texas Co. No. 14 Osage, C SE NW section 30-25-8, encountered water and was completed as a water disposal well at 1,457 feet, total depth. It had a hole full of water in sand at 1,405-55 feet. Sinclair Prairie Oil Co. No. 27 Osage, SE NW NE section 5-21-10, had sand at 1,120-73 feet, total depth; bailed 58 bbls. of oil and 16 bbls. of water, and then pumped 20 bbls. of oil and 5 bbls. of water, completed. Wynona Oil Co. No. 20 Osage, NW NW NE section 9-20-12, had pay at 494 to 502 feet, was bottomed at 544 feet and plugged back to base of pay. After acidizing, it pumped 25 bbls. of oil and 50 bbls. of water and was completed.

New Osage County operations follow: T. O. Lilystrand No. 5 Osage, NW SE SE section 14-21-10, location; Peters Oil Corp. and Sinclair Prairie Oil Co. No. 12 Osage, NW SW NE section 24-24-7, location; Harland Oil Co. and others No. 77 Osage, NE NW NW section 25-24-11, drilling at 1,175 feet; Champlin Refining Co. No. 5 Terrell, SW NW SE section 15-25-6, building rig.

Kay County

There were no completions in Kay County. Work was started at one new location. It was Clark-Nye No. 1 Orr, SW SW NE section 5-28-1w, in the Braman area, building rig.

Noble County

Work had started at one new location in Noble County. It was Mid-Co. Oil Corp. and others No. 1 Hackett, SW SW NW section 23-23-2w, in the Billings area, digging cellar.

Logan County

Activity in Logan County fields was at routine stage, no completions and only one new test being reported. Mul-Berry Oil & Gas Co. No. 1 Quigley, SW cor. section 21-18-4w, in the Lovell area, was building rig.

Pawnee County

Test Oil Co. and others No. 1-A Perry, SE NW NW section 9-21-8, had Cleveland sand at 1,574 to 1,602 feet, total depth, and was completed. It was shot with 40 quarts at 1,593-1,602 feet, and pumped 2 bbls. of oil and 24 bbls. of water in 24 hours.

Cleveland County

Work was started at another new test in the Moore area of Cleveland County, but was shut down because of litigation. It was the M. T. Myers and others No. 1 Myers (fee), SE NW NW section 27-10-2w, cellar and pits.

Garvin County

Not discouraged by previous failures in the general area, McElreath & Suggett were preparing to start a new wildcat test on their acreage in Garvin County. The No. 1 Lasater, SE SE SW section 2-2-1w, southwest of Pauls Valley, was a location.

Carter County

Little more than routine activity was reported in Carter County. There were two new operations. W. E. Hammond No. 1 J. Rile, SW SE SE section 8-5s-1e, wildcat, shallow test, was drilling at 115 feet. B. G. Barnett No. 4 Lynn, C N half NE section 31-1s-2w, was a location.

Marshall County

One new operation was started in Marshall County. G. M. Felts No. 6 fee, SW NW NW section 6-8s-6e, was drilling at 280 feet.

Southwestern Oklahoma

Raisen Brothers No. 6 Lewis, NE SE NW section 7-2s-4w, in the Velma area of Stephens County, was completed as a 1-bbl. pumper in sand at 431-446 feet, total depth. Same operators' No. 7 Lewis, NW SE NW section 7-2s-4w, Stephens County, was dry and abandoned at 442 feet, total depth.

Reno Oil Co. No. 1 Gaun, SE SW NE section 35-6s-4w, wildcat in southeastern Jefferson County, was dry and abandoned at 3,176 feet, total depth, in sandy shale.

New work in southwestern Oklahoma: In Stephens County, Raisen Brothers No. 5 Crosbie, NW SW SW SW section 23-1s-5w, had production estimated at 3 bbls. of oil a day at 386 feet, total depth, and was running liner; same operators' No. 6 Crosbie, NE SW SW SW section 23-1s-5w, was a location.

In Comanche County, Earl Fisher No. 1 F. Rowell, NW NE SE section 21-2-10w, was drilling at 725 feet in shale.

In Jefferson County, Long, Yingling & Lauck No. 18 Seay, SE SW SE section 3-7s-5w, set 10-inch casing at 58 feet and was waiting on cement.

In Cotton County, Shasta Oil Co. No. 10 Chambers, NW NE SE section 2-2s-10w, was a location; same operator's No. 12 Cobb, SW SE NE section 2-2s-10w, was drilling at 1,047 feet.

In Tillman County, Johnson, Young & Mitchell No. 1 Donahoe, SE NW NW section 7-4s-17w, was location for a wildcat test in the southern part of the county near the Red River.

In Jackson County, Pioneer Oil Co. No. 1 N. Rawls, SW NW NE section 26-1n-20w, wildcat near the Altus pool, was rigging up machine; Gulf Oil Corp. No. 2 Johnson, SE cor. sec-

tion 11-1n-20w, was rigging up rotary tools.

Creek County

Tide Water Oil Co. No. 15 Turnbow, SE SW SW section 12-17-7, in Creek County, was dry and abandoned in Bartlesville sand at 2,970-83 feet. Sinclair Prairie Oil Co. No. 22 Jones, NW SE NW section 3-17-7, an old well, was deepened from 2,504 feet to 2,540 feet and pumped 31 bbls. after a shot with 60 quarts. Simpson horizon was topped at 2,504 feet.

New work in Creek County: J. M. Scott No. 2 Riverbed, NW SW SE section 8-18-7, rigging up standard tools; Pippis and others No. 1-A Goodman, SW SE SW SW section 23-17-9, machine; Sinclair Prairie Oil Co. No. 23 Jones, NE SE NW section 3-17-7, old well rigging up to deepen from 2,476 feet.

Okmulgee County

Klingensmith No. 14 Farr, SW NE NW section 35-16-11, an old Okmulgee County well deepened from 1,891 to 2,332 feet, swabbed 150 bbls. of oil in 24 hours and was recompleted. Strozier No. 1-A Caldson, C SW NE section 21-16-11, was dry and abandoned in sand at 2,323 to 2,340 feet, total depth.

New work in Okmulgee County was as follows: Reliance Oil Co. No. 6 Anthis, CEL NW NE section 27-16-11, spudded; Aggis Drilling Co. No. 3-A McKinney, NE SW NW SW section 16-15-14, machine; Howard No. 2 Rentie, NE NW SE section 18-14-15, location; Wilcox No. 1 Bockler, NE SW NE section 22-13-12, had sand at 1,854 to 1,905 feet and produced 200,000 feet of gas.

Tulsa County

Detmer No. 3 McIntosh, CSL NW SE section 4-18-14, in Tulsa County, was shot with 40 quarts, pumped 5 bbls. of oil in 24 hours from sand at 1,406 to 1,445 feet, and was completed. Sinclair Prairie Oil Co. No. 13 Durant, NW NW SE section 3-17-12, was dry and abandoned in sand at 2,178 to 2,240 feet.

Only new operation reported in Tulsa County was Mechling No. 2 Grayson, CSL NE NE section 18-19-14, shut down at 360 feet, total depth.

Muskogee County

One completion in Muskogee County was reported. Metzger No. 4 Field, SW NW NE section 17-15-17, was dry and abandoned at 1,887 feet, total depth. It had sand at 1,883 to 1,885 feet.

Wagoner County

Three failures were reported in Wagoner County. Green and others No. 1 McIntosh, C NW NW section 7-17-15, had sand at 1,357 to 1,365 feet and was dry and abandoned at 1,400 feet, total depth. McIntire No. 1 Martin, SW NE NE section 34-18-15, topped sand at 1,683 feet and was bottomed at 1,728 feet. Acid treatment failed to make a producer, and it was dry and abandoned. Boley No. 1 Jackson, CNL SW SW section 3-17-15, was dry and abandoned in sand at 1,805 to 1,812 feet, total depth.

Watson B. Joyes, vice president and general manager for Ryan Consolidated Petroleum Corporation, Tulsa, has succeeded Phelan Beale as president. Mr. Beale resigned and became chairman of the board of directors.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, May 2.—On the Del Bonita structure south of Lethbridge, Alberta, Terminal Oil Co. No. 1 H. Orcutt, NE section 18-1-21w4, looks like a fair commercial producer from the Sunburst sand between 4,570 and 4,700 feet, with some additional production from the top of the Madison limestone at 5,090 feet. The well, which last fall got encouraging shows in the Madison, was recently bridged back to 4,700 feet and casing gun-perforated with 300 shots to test the Sunburst. While swabbing, a burst of gas jammed the tools. When cleared, it was found a bridge had frozen; and this was being cleared with water and live steam when the well unexpectedly blew in, hurling oil, water and debris through the derrick. The ground for a quarter mile around was sprayed with oil. Fragments of Ellis shale indicated the 35-foot plug had been dislodged and production was coming from both the Sunburst and the Madison.

Drilling Superintendent Pat Adams and Driller Earl Boyd both sustained serious facial injuries. They were taken to St. Michael's Hospital in Lethbridge. Adams may lose the sight of an eye.

The well blew wide open for some time but was got under control. Little damage was done to the derrick or equipment except the flow lines. Initial gas flow was estimated between 20,000,000 and 30,000,000 feet a day with light crude flowing by heads at a rate of around 300 bbls. a day. Later the hole bridged again, pinching the flow. At last reports it was flowing between 25 and 50 bbls. a day. It is being cleaned out for a production test.

Sunshine Oils, Ltd., of Vancouver has No. 1 test spotted in section 19-1-21w4, north of Terminal No. 1 and lower on the structure.

Alberta Production

Crude production from Alberta in March totaled 101,857 bbls. compared with 96,077 in February. The daily average decreased from 3,313 bbls. to 3,285 bbls. Turner Valley naphtha was up from 92,562 to 97,726 bbls., and Turner Valley light crude from 1,198 to 1,249 bbls. Red Coulee-Border light crude increased from 1,431 to 2,020 bbls. and Wainwright heavy crude dropped from 886 to 732 bbls. The Skiff field, which produced nothing in February, yielded 130 bbls. in March.

In Turner Valley, Royalite Oil Co. was the largest producing unit with 50,225 bbls. Mercury-Miracle produced 13,271 bbls., and Model Oils, Ltd., 5,381 bbls. Century Royalties, Ltd., ranked fourth with 5,085 bbls. from its one well, probably the largest individual producer in the field. Among newer wells, British Dominion Oil & Development Corp. No. 4, LSD 6, section 28-18-2w5, delivered 2,650 bbls., and Union-Freehold No. 1, LSD 8, section 21-18-2w5, produced 1,060 bbls.

In the Red Coulee field, Vanalta wells produced 1,243 bbls. and the O'Neil well 327 bbls. Terminal Oil Co. No. 1 on the Del Bonita structure produced 450 bbls. Of four producing wells in the Wainwright field, Sasko-Wainwright No. 1 had the largest production, 300 bbls.

North Turner Valley

In the North Turner Valley field, Model Oils No. 3, LSD 1, section 22-20-3w5, has run tubing and is testing production. It was completed last fall to 6,240 feet, some 505 feet in the limestone, which was found very tight, with only about 1,500,000 feet of gas per day, and a very small naphtha recovery. It was given a shot of 1,020 quarts, increasing the flow slightly. Acid solution totaling 114 bbls. was used when the well caved in the lime, about 100 bbls. of debris being cleaned out. When cleaning started, the gas flow was increased to 3,000,000 feet a day. Tubing has been run to 5,850 feet and a production test is being made. Model Oils No. 1 in LSD 8, same section, has the largest gas-oil ratio in Turner Valley, producing 140 bbls. a day from around 1,700,000 feet of gas.

South Turner Valley

In section 21-18-2w5, South Turner Valley, Union-Freehold Oil Corp. No. 1, LSD 8, is deepening in the lime below 6,357 feet. Production tests at 6,260 feet showed about 2,500,000 feet of wet gas per day with around 35 bbls. naphtha recovery. It is more than 750 feet in the lime.

Farther south, same section, Highwood-Sarcee Oils No. 2, LSD 1, is below 4,250 feet, logging high, and getting close to the Home sand.

In section 28-18-2w5, Turner Valley Royalties No. 1, LSD 13, is in the Home sand below 5,970 feet. Renfrew Royalties No. 1 Morris & Goodfellow, LSD 3, same section, is cleaning out to the lime at 6,020 feet. Sterling-Pacific No. 3, LSD 13, section 33-18-2w5, has derrick up and installing equipment. It will spud this month.

New Tests in South

In section 21-18-2w5, there is considerable new activity, mostly toward the west side of the structure. Union Drilling Co. of Calgary has spotted a test in LSD 7, northwest corner of the subdivision, and directly west of Union-Freehold No. 1 in LSD 8. As soon as the latter is finished, the rig will be moved to the new location. Recent completions on the east side have been small wells, and operations are trending toward the west where, in several wells, deeper drilling has resulted in larger production.

In the north end, Sovereign Royalties, Ltd., is assembling rotary equipment and will deepen Myers & Wright No. 1, LSD 14, from 2,260 feet. It is west of Highwood-Sarcee Oils No. 1 and south of Carleton Royalties No. 1, both good producers from the lime.

Northwest Royalties No. 1, LSD 5, same section, will be completed by Foundation Petroleums, Ltd., recently organized at Calgary. It is about a half mile west of Union-Freehold No. 1, on the west side. The well has been standing for over a year at 3,300 feet, after getting a gas show at 2,390 feet and encountering some new structural features in the upper formations. Arrangements for completion were made by Anglo-Canadian Development & Holding Co. The location is the farthest west in section 21.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, is below 5,447 feet.

On the Jumping Pound structure west of Calgary, Northwest Co. No. 3 Bow River, LSD 6, section 31-34-4w5, is below 1,010 feet. No oil showings have been encountered, but there has been considerable gas in the upper horizons. Imperial Oil No. 2 Bow Valley, immediately north, some years ago got oil shows at 1,068 feet.

On the Highwood-Sinclair structure south of Turner Valley, Maple Leaf Royalties No. 1 Banner, LSD 6, section 34-17-3w5, is ready to resume at 2,597 feet.

On the Kootenay dome structure, Roxana Petroleums, Ltd., is awarding contract to complete 4 miles of road from the Kananaskis Lake road to location in section 8-24-7w5. Equipment may be moved in late in May.

Aldersyde Area

In the High River-Aldersyde area east of Turner Valley, Arca Development Corp. No. 1, NW section 24-18-1w5, will spud about May 15. Ranchmen's Gas & Oil Co. No. 1, LSD 16, section 13-20-29w4, is in hard formation below 6,700 feet.

A Calgary syndicate has applied to the Alberta lands and mines department for a prospecting permit covering 7,040 acres in Township 20-26w4, east of Okotoka and north of Blackie. The acreage is somewhat east of Ranchmen No. 1.

North Battleford Test

A local oil syndicate has been granted permission by the North Battleford, Saskatchewan, city council to drill for oil within the city limits, near the exhibition grounds.

Ontario Drilling

In Beverly Township, Wentworth County, Ontario, a fair show of shallow oil has been encountered on the Fred Biggs farm, Concession 5. It is in an area tested by Rockton Oil & Gas Co. which is securing additional acreage.

In the south end of Raleigh Township, Kent County, F. W. Burchell and associates No. 1, E half Lot 151, Talbot Road, west of De Clute, has spudded and is around 300 feet.

In Brownville field, Dereham Township, Oxford County, Archie Treleaven No. 1, George Clark farm, Lot 23, Concession 11, finished in the Niagara limestone at 915 feet with initial production of 783,000 feet a day, and 460 pounds rock pressure. It is north of the discovery well.

Summary of Operations, All Fields, February

SUMMARY OF ALL FIELDS

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	47	248	295
Central Ohio	32	83	115
Lima	3	29	32
Indiana	0	12	12
Michigan	78	130	208
Kentucky	0	1	1
Kansas	57	262	319
Oklahoma	80	461	541
North Central Texas	61	233	294
East Texas	129	204	333
East Texas (border counties)	9	13	22
West Texas	59	242	301
Panhandle Texas	28	122	150
Gulf Coast, Texas	37	102	140
Gulf Coast, Louisiana	20	74	94
Southwest Texas	32	175	207
North Louisiana	42	95	137
Arkansas	16	24	40
Montana	10	60	70
Wyoming	6	55	61
Colorado	3	30	33
New Mexico	16	97	113
Utah	1	11	12
Total Feb.	766	2,764	3,530
Total Jan.	703	2,737	3,440
Difference	63	27	90

Wells Completed

	Comp.	Prod.	Dry	Gas
Eastern	178	941	3	30
Central Ohio	22	187	6	13
Lima	3	1	2	0
Indiana	9	15	7	1
Michigan	33	5,145	10	7
Kentucky	5	538	1	0
Kansas	79	27,239	21	9
Oklahoma	140	69,649	21	19
North Central Texas	178	5,386	79	4
East Texas	208	7,333	11	1
East Texas (border counties)	2	1,600	0	1
West Texas	75	37,463	10	2
Panhandle, Texas	43	15,774	3	11
Gulf Coast, Texas	82	25,746	23	2
Gulf Coast, Louisiana	23	8,560	8	0
Southwest Texas	176	52,395	39	6
North Louisiana	43	37,117	8	7
Arkansas	8	1,910	4	0
Montana	4	371	0	2
Wyoming	4	1,680	3	0
Colorado	2	0	2	0
New Mexico	33	48,587	6	1
Total Feb.	1,350	347,637	282	116
Total Jan.	1,609	496,799	353	128
Difference	259	147,162	71	12

KANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Barton	4	2,498	1	0	7	24	31
Butler	4	117	2	0	0	6	6
Chase	0	0	0	0	0	1	1
Coffey	1	41	0	0	0	2	2
Cowley	2	0	0	2	7	15	22
Dickinson	1	0	1	0	0	0	0
Elk	2	184	1	0	0	0	0
Ellis	2	1,232	1	0	3	8	11
Ellsworth	1	0	1	0	1	10	11
Graham	0	0	0	0	0	2	2
Greenwood	5	45	2	1	0	12	12
Harper	0	0	0	0	0	1	1
Harvey	4	126	2	1	1	7	8
Haskell	1	0	0	1	1	1	2
Kearny	0	0	0	0	1	0	1
Kingman	1	0	1	0	0	0	0
Morris	0	0	0	0	0	1	1
Marion	0	0	0	0	0	2	2
McPherson	2	289	0	0	2	7	9
Norton	1	0	1	0	0	1	1
Osage	0	0	0	0	0	1	1
Pratt	2	285	0	1	0	1	1
Reno	7	4,281	0	1	6	25	31
Rice	9	6,449	2	0	4	51	55
Rooks	0	0	0	0	0	1	3	4
Rush	0	0	0	0	1	2	4	6
Russell	12	4,610	2	0	12	40	52
Scott	0	0	0	0	0	0	1	1
Sedgwick	2	634	0	0	0	0	4	4
Stafford	1	1,034	0	0	1	4	5
Stevens	1	0	0	1	1	2	3
Sumner	12	5,253	3	0	5	18	23
Trego	0	0	0	0	0	1	3	4
Woodson	1	250	0	0	0	1	5	6
Ttl. Feb.	79	27,239	21	9	57	262	319
Ttl. Jan.	120	93,361	25	8	57	249	306
Difference	41	66,122	4	1	0	13	13

OKLAHOMA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Alfalfa	0	0	0	0	0	1	1
Atoka	0	0	0	0	0	4	4
Beaver	0	0	0	0	0	1	1
Beckham	0	0	0	0	1	1	2
Blaine	0	0	0	0	0	1	1
Bryan	0	0	0	0	1	1	2
Caddo	0	0	0	0	1	6	7
Carter	6	302	0	2	4	21	25
Choctaw	0	0	0	0	0	2	2
Cleveland	0	0	0	0	0	3	3
Coal	2	0	2	0	0	1	1
Comanche	3	40	1	0	1	10	11
Cotton	1	0	1	0	0	1	1
Creek	14	324	3	2	5	30	35
Garfield	0	0	0	0	0	4	4
Garvin	0	0	0	0	0	3	3
Grady	0	0	0	0	0	5	5
Grant	0	0	0	0	0	2	2
Harmon	0	0	0	0	0	2	2
Hughes	8	1,555	0	1	3	14	17
Jackson	4	417	1	1	0	8	8
Jefferson	1	0	1	0	0	4	4
Johnston	0	0	0	0	0	1	1
Kay	2	0	0	2	0	4	4
Kiowa	1	0	1	0	0	5	5
LeFlore	0	0	0	0	0	1	1
Lincoln	2	632	1	1	1	7	8
Logan	4	1,731	2	0	2	9	11
Love	0	0	0	0	0	3	3
Marshall	3	60	0	1	0	8	8
McClain	0	0	0	0	0	1	1
McIntosh	0	0	0	0	1	2	3
Murray	0	0	0	0	0	1	1
Muskogee	2	100	1	0	0	8	8
Noble	2	981	0	0	3	6	9
Okfuskee	1	0	0	1	4	19	23
Oklahoma	3	3,094	1	0	8	25	33
Okmulgee	4	25	2	1	4	29	33
Osage	20	12,829	4	1	8	39	47
Pawnee	0	0	0	0	0	2	2
Payne	0	0	0	0	2	5	7
Pittsburgh	0	0	0	0	0	2	2
Pontotoc	22	39,350	3	2	16	66	82
Pottawatomie	8	3,231	2	0	2	11	13
Pushmataha	0	0	0	0	0	1	1
Roger Mills	0	0	0	0	0	1	1
Seminole	17	4,875	3	1	7	41	48
Stephens	6	68	2	1	1	14	15
Tillman	0	0	0	0	1	2	3
Tulsa	1	0	0	1	3	18	21
Wagoner	3	35	0	1	1	4	5
Washita	0	0	0	0	0	1	1
Ttl. Feb.	140	69,649	21	19	80	461	541
Ttl. Jan.	217	165,865	59	18	59	461	520
Diff.	77	96,216	28	1	21	0	21

GULF COAST

Texas

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Amelia	1	480	0	0	0	2	2
Anahuac	8	4,992	0	0	3	8	11
Barbers Hill	0	0	0	0	1	6	7
Batson	2	200	1	0	1	0	1
Bay City	0	0	0	0	0	2	2
Big Hill	0	0	0	0	0	1	1
Big Creek	1	0	1	0	0	2	2
Blue Ridge	1	200	0	0	1	1	2
Bryan Mound	1	0	1	0	0	0	0
Clay Creek	1	0	1	0	0	1	1
Cleveland	0	0	0	0	0	1	1
Conroe	3	684	2	0	0	0	0
Dickinson	5	738	1	1	2	5	8
Esperson	3	0	3	0	1	0	1
Fannett	1	22	0	0	1	0	1
Greta	1	100	0	0	0	2	2
Hankamer	1	321	0	0	0	0	0
Hastings	5	2,683	0	0	3	3	6
High Island	3	802	0	0	3	1	4
Humble	0	0	0	0	0	1	1
Livingston	4	1,271	1	0	0	3	3
Lost Lake	0	0	0	0	0	1	1
Louise	1	0	0	1	0	1	1
Manvel	2	1,500	0	0	1	4	5
Markham	2	450	1	0	0	0	0
Mykawa	1	560	0	0	1	0	1
Orange	0	0	0	0	1	0	1
Orchard	0	0	0	0	0	3	3
Pickett Ridge	1	552	0	0	2	2	4
Pierce Junction	1	570	0	0	0	3	3
Placedo	5	1,117	0	0	2	6	8
Port Neches	0	0	0	0	0	1	1
Raccoon Bend	4	650	1	0	0	1	1
Saratoga	0	0	0	0	0	1	1
S. Houston	0	0	0	0	0	6	6
Thompson	0	0	0	0	0	1	1
Tomball	9	3,916	0	0	0	3	3
Tomoconner	3	3,370	0	0	0	1	1
Turtle Bay	1	118	0	0	0	1	1
Withers	1	360	0	0	2	0	2
Misc.	10	0	10	0	11	28	39
Total Feb.	82	25,746	23	2	37	103	140
Total Jan.	73	21,959	19	3	36	114	150
Difference	9	3,787	4	1	1	11	10

Louisiana

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Bay St. Elaine	0	0	0	0	0	1	1
Bayou Mallet	1	0	1	0	1	0	1
Black Bayou	1	470	0	0	0	2	2
Caillou Isl.	1	1,013	0	0	0	1	1
Cameron Meadows	0	0	0	0	2	1	3
Cheneyville	1	228	0	0	0	1	1
Choctaw	0	0	0	0	1	1	2
Darrow	1	0	1	0	2	1	3
Garden Isl.	1	295	0	0	0	1	1
Gillis	2	1,508	0	0	2	7	9
Gueydan	1	0	1	0	0	0	0
Hackberry	2	789	1	0	0	3	3
Iowa	0	0	0	0	0	4	4
Jeanerette	0	0	0	0	0	1	1
Jennings	3	383	0	0	0	1	1
Lafitte	1	1,769	0	0	1	1	2
Lake Barre	0	0	0	0	1	1	2
Lake Hermitage	0	0	0	0	0	1	1
Lake Pelto	0	0	0	0	0	1	1
Leesville	1	1,029	0	0	0	4	1	5
New Iberia	1	0	1	0	0	0	0
Pt. Barre	0	0	0	0	0	3	3
Roanoke	1	600	0	0	0	4	4
St. Martinsville	1	0	1	0	0	2	2
Sorrento	0	0	0	0	1	0	1
Starks	0	0	0	0	0	1	1
Sulphur	0	0	0	0	0	2	2
Sweet Lake	0	0	0	0	0	1	1
Tepetate	1	165	0	0	1	2	3
Vinton	1	400	0	0	0	2	2
White Castle	0	0	0	0	0	1	1
Misc.	2	0	2	0	3	25	28
Total Feb.	23	8,560	8	0	20	74	94
Total Jan.	28	8,508	11	2	15	57	72
Difference	5	52	3	2	5	17	22

WEST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Andrews	0	0	0	0	1	3	4
Borden	1	0	1	0	0	0	0
Brewster	0	0	0	0	0	2	2
Concho	0	0	0	0	0	2	2
Crane	7	3,404	0	0	1	12	13
Crockett	1	251	0	0	0	5	5
Culberson	0	0	0	0	0	1	1
Dawson	0	0	0	0	0	1	1
Ector	3	2,358	0	0	4	20	24
Edwards	0	0	0	0	0	3	3
El Paso	0	0	0	0	0	2	2
Fisher	2	860	1	0	0	7	7
Gaines	0	0	0	0	1	2	3
Garza	0	0	0	0	0	1	1
Glasscock	1	0	1	0	0	3	3
Howard	6	2,521	1	0	5	11	16
Hudspeth	0	0	0	0	0	1	1
Irion	1	0	1	0	0	1	1
Jeff Davis	0	0	0	0	0	1	1
Jones	5	789	1	0	3	22	25
Kimble	1	0	1	0	0	0	0
Loving	1	238	0	0	1	1	2
Lynn	0	0	0	0	0	1	1
Martin	0	0	0	0	0	2	2
Menard	0	0	0	0	0	2	2
Nolan	0	0	0	0	0	1	1
Pecos	15	4,147	2	1	14	21	35
Presidio	0	0	0	0	0	1	1
Reagan	0	0	0	0	1	0	1
Reeves	0	0	0	0	0	2	2
Runnels	0	0	0	0	0	2	2
Schleicher	1	12	0	0	0	2	2
Scurry	0	0	0	0	0	2	2
Taylor	0	0	0	0	0	1	1
Terrell	0	0	0	0	0	1	1
Tom Green	1	0	1	0	0	1	1
Upton	6	2,754	0	0	0	11	11
Ward	9	8,185	0	0	14	41	55
Winkler	14	11,944	0	1	13	49	62
Yoakum	0	0	0	0	0	1	1
Ttl. Feb.	75	37,463	10	2	59	242	301
Ttl. Jan.	107	35,987	18	4	61	222	283
Difference	32	1,524	8	2	2	20	18

EAST CENTRAL AND EAST TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Anderson	5	590	0	0	2	9	11
Angelina	0	0	0	0	0	4	4
Bowie	0	0	0	0	0	1	1
Cherokee	2	100	1	0	0	3	3
Ellis	0	0	0	0	0	1	1
Fannin	0	0	0	0	1	2	3
Franklin	0	0	0	0	0	1	1
Freestone	1	0	1	0	0	0	0
Gregg	75	2,224	3	0	46	53	99
Henderson	2	109	0	1	4	2	6
Hill	0	0	0	0	0	1	1
Kaufman	0	0	0	0	0	2	2
Lamar	2	0	2	0	2	3	5
Limestone	0	0	0	0	0	4	4
Nacogdoches	0	0	0	0	1	1	2
Navarro	0	0	0	0	0	2	2
Rains	0	0	0	0	0	1	1
Red River	1	0	1	0	2	3	5
Rockwall	0	0	0	0	1	1	2
Rusk	85	3,073	1	0	47	67	114
Smith	16	687	1	0	4	12	16
Titus	0	0	0	0	2	2	4
Upshur	13	464	0	0	14	26	40
Van Zandt	5	85	0	0	2	3	5
Wood	1	0	1	0	0	0	0
Total Feb.	208	7,333	11	1	129	204	333
Total Jan.	231	7,914	18	2	79	195	274
Difference	23	581	7	1	50	9	59

SOUTHWEST TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Baldwin	1	670	0	0	0	0	0
Blas Uribe	0	0	0	0	1	0	1
Caesar	2	25	1	0	0	0	0
Callihan	3	29	2	0	0	2	2
Carolina-Texas	1	0	1	0	1	0	1
Charamousca	1	0	1	0	0	0	0
Clara Driscoll	1	0	1	0	0	0	0
Cole	2	0	1	1	0	1	1
Dale	0	0	0	0	0	1	1
Dirks	4	1,860	0	0	0	2	2
Eagle Hill	0	0	0	0	0	2	2
Eckert	1	10	0	0	0	1	1
Escobas	2	90	0	0	0	1	1
Govt. Wells	3	170	1	1	0	3	3
Guerra	1	240	0	0	0	0	0
Haynes	2	70	0	0	0	2	2
Hoffman	0	0	0	0	1	2	3
Hondo	1	0	1	0	0	0	0
Jacob	1	20	0	0	0	3	3
Loma Novia	43	21,430	0	0	7	22	30
Lopez	19	7,950	1	1	0	6	6
McNeill	1	0	1	0	0	0	0
Mercedes	0	0	0	0	0	2	2
Mt. Lucas	0	0	0	0	0	1	1
N. Pettus	1	105	0	0	1	0	1
O'Hern	7	1,345	0	1	0	4	4
Pearsall	0	0	0	0	2	3	5
Piedra Lumbre	2	240	0	1	0	2	2
Plummer	0	0	0	0	1	0	1
Plymouth	8	1,155	2	0	1	4	5
Salt Flat	0	0	0	0	0	1	1
Samfordyce	6	340	1	0	0	8	8
San Diego	0	0	0	0	0	1	1
Sarnosa	1	0	1	0	0	0	0
Saxet	7	2,530	1	0	1	15	16
Saxet Hts.	11	5,265	0	0	2	14	16
Seven Sisters	21	8,590	2	0	1	13	14
Taft	1	0	1	0	1	2	3
Miscl.	21	360	19	1	12	56	68
Ttl. Feb.	176	52,395	39	6	32	175	207
Ttl. Jan.	152	36,910	30	3	44	155	199
Difference	24	15,485	9	3	12	20	8

NORTH AND CENTRAL TEXAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Archer	34	599	17	0	9	26	35
Baylor	2	478	1	0	1	8	9
Brown	1	0	1	0	2	4	6
Callahan	8	50	5	1	0	15	15
Clay	1	12	0	0	2	1	3
Coleman	3	60	2	0	1	3	4
Comanche	1	25	0	0	0	4	4
Collin	0	0	0	0	0	2	2
Cooke	24	697	6	0	7	36	43
Denton	1	0	1	0	1	3	4
Eastland	4	0	4	0	1	8	9
Erath	0	0	0	0	0	2	2
Foard	0	0	0	0	0	2	2
Grayson	0	0	0	0	0	2	2
Haskell	3	0	3	0	0	0	0
Hamilton	0	0	0	0	1	2	3
Jack	5	720	2	0	3	16	19
McCulloch	1	0	1	0	0	2	2
Mills	0	0	0	0	0	1	1
Montague	8	259	1	0	4	8	12
Parker	0	0	0	0	0	1	1
Shackelford	17	210	10	1	6	17	23
Stephens	2	25	0	0	0	2	2
Tarrant	0	0	0	0	0	1	1
Throckmorton	2	35	0	1	3	2	5
Wichita	20	483	10	0	3	14	17
Wilbarger	9	369	5	0	5	16	21
Wise	0	0	0	0	0	3	3
Young	32	1,364	10	1	12	32	44
Total Feb.	178	5,386	79	4	61	233	294
Total Jan.	196	10,570	90	2	76	230	306
Difference	18	5,184	11	2	15	3	12

TEXAS PANHANDLE

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Carson	2	438	0	1	2	7	9
Collingsworth	1	0	0	0	1	0	0
Cottle	0	0	0	0	0	1	1
Gray	18	7,898	1	0	7	38	45
Hall	1	0	1	0	0	1	1
Hartley	0	0	0	0	0	1	1
Hutchinson	8	3,611	0	1	6	21	27
Moore	7	459	0	6	8	14	22
Ochiltree	0	0	0	0	1	0	1
Potter	1	0	0	1	0	1	1
Roberts	0	0	0	0	0	1	1
Wheeler	5	3,328	1	1	4	27	31
Total Feb.	43	15,774	3	11	28	122	150
Total Jan.	65	24,751	2	16	39	133	172
Difference	22	8,977	1	5	11	11	22

LOUISIANA-ARKANSAS

North Louisiana

Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Gas*	Rgs.	Dig.	Ttl.
Bienville	0	0	0	0	1	3	4
Bossier	3	12	1	1	0	3	3
Caddo	27	37,100	0	1	17	55	72
Caldwell	0	0	0	0	0	2	2
Claiborne	0	0	0	0	0	5	5
Concordia	0	0	0	0	0	1	1
DeSoto	1	0	0	1	1	6	7
Grant	0	0	0	0	0	2	2
Jackson	1	0	1	0	3	0	3
La Salle	1	0	1	0	0	2	2
Lincoln	0	0	0	0	1	2	3
Morehouse	2	0	0	2	7	0	7
Natchitoches	2	0	2	0	0	0	0
Ouachita	0	0	0	0	1	0	1
Red River	1	0	1	0	0	0	0
Richland	0	0	0	0	0	2	2
Sabine	3	5	2	0	3	7	10
Tensas	0	0	0	0	1	0	1
Union	2	0	0	2	5	1	6
Vernon	0	0	0	0	0	1	1
Webster	0	0	0	0	0	2	2
Winn	0	0	0	0	0	1	1
Total Feb.	43	37,117	8	7	43	95	147
Total Jan.	43	35,400	10	4	26	86	116
Difference	0	1,383	2	3	18	19	31

Note: The initial production of the Redessa field, Caddo Parish, is the initial flow through one-half inch choke and not the potential. *Gas production: Bossier,

53,000,000 feet; Caddo, 2,500,000; DeSoto, 24,500,000; Morehouse, 4,000,000; Union, 22,000,000; total, 105,000,000 feet.

Arkansas

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Arkansas	0	0	0	0	1	0	1
Calhoun	0	0	0	0	1	0	1
Clarke	0	0	0	0	0	1	1
Columbia	0	0	0	0	0	1	1
Hempstead	0	0	0	0	2	2	4
Lafayette	0	0	0	0	0	5	5
Miller	1	60	0	0	9	3	12
Monroe	0	0	0	0	0	1	1
Ouachita	1	0	1	0	0	3	3
Pulaski	0	0	0	0	0	1	1
Sevier	1	0	1	0	0	0	0
Union	5	1,850	2	0	3	7	10
Total Feb.	8	1,910	4	0	16	24	40
Total Jan.	12	1,160	10	0	14	29	43
Difference	4	750	6	0	2	5	3

East Texas (Border Counties)

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rga.	Dig.	Ttl.
Cass	2	1,600	0	1	1	2	3
Harrison	0	0	0	0	2	2	4
Marion	0	0	0	0	2	2	4
Panola	0	0	0	0	2	4	6
Shelby	0	0	0	0	2	3	5
Total Feb.	2	1,600	0	1	9	13	22
Total Jan.	0	0	0	0	9	13	22
Difference	2	1,600	0	1	0	0	0

ROCKY MOUNTAIN AREA

Montana

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Big Horn	1	0	0	1	0	2	2
Carbon	0	0	0	0	0	2	2
Fergus	0	0	0	0	0	8	8
Glacier	2	371	0	0	6	17	23
Liberty	1	0	0	1	0	0	0
Pondera	0	0	0	0	0	2	2
Toole	0	0	0	0	4	16	20
Misel.	0	0	0	0	0	13	13
Ttl. Feb.	4	371	0	2	10	60	70
Ttl. Jan.	12	2,264	1	2	10	56	66
Difference	8	1,893	1	0	0	4	4

Northwest New Mexico

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Bernalillo	1	0	1	0	0	1	1
McKinley	0	0	0	0	0	5	5
Rio Arriba	0	0	0	0	1	0	1
Santa Fe	0	0	0	0	0	2	2
San Juan	1	56	0	0	0	11	11
Torrance	0	0	0	0	0	2	2
Valencia	0	0	0	0	1	3	4
Lea	26	48,336	2	1	13	60	73
Eddy	5	145	3	0	2	6	8
Chaves	0	0	0	0	0	1	1
San Miguel	0	0	0	0	0	3	3
Quay	0	0	0	0	0	1	1
Union	0	0	0	0	0	1	1
Guadalupe	0	0	0	0	0	1	1
Ttl. Feb.	33	48,537	6	1	16	97	113
Ttl. Jan.	33	31,494	1	3	12	97	109
Difference	0	17,093	5	2	4	0	4

Colorado

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Adams	0	0	0	0	0	2	2
Archuleta	0	0	0	0	0	5	5
Huerfano	0	0	0	0	0	3	3
Larimer	1	0	1	0	0	2	2
Moffat	0	0	0	0	1	1	2
Park	0	0	0	0	0	1	1
Weld	1	0	1	0	0	0	0
Misel.	0	0	0	0	2	16	18
Ttl. Feb.	2	0	2	0	3	30	33
Ttl. Jan.	3	35	2	0	4	28	32
Difference	1	35	0	0	1	2	1

Wyoming

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Albany	0	0	0	0	0	2	2
Big Horn	1	0	1	0	1	12	13
Carbon	1	0	1	0	0	7	7
Converse	0	0	0	0	0	3	3
Fremont	0	0	0	0	0	2	2
Lincoln	0	0	0	0	0	2	2
Hot Springs	0	0	0	0	0	2	2
Niobrara	1	1,680	0	0	2	6	8
Park	0	0	0	0	1	2	3
Sweetwater	0	0	0	0	0	2	2
Sublet	0	0	0	0	0	3	3
Uinta	1	0	1	0	0	2	2
Washakie	0	0	0	0	0	3	3
Weston	0	0	0	0	1	5	6
Misel.	0	0	0	0	1	2	3
Ttl. Feb.	4	1,680	3	0	6	55	61
Ttl. Jan.	8	7,292	1	0	6	57	63
Difference	4	5,612	2	0	1	2	2

Utah

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Total Feb.	0	0	0	0	1	11	12
Total Jan.	1	0	1	0	1	11	12
Difference	1	0	1	0	0	0	0

EASTERN FIELDS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Bradford	110	115	9	0	7	46	53
Allegany	4	3	0	0	0	1	1
Venango-Clarion	6	4	0	1	4	3	7
Butler-Armstrong	2	0	1	1	3	6	9
S. W. Pa.	6	85	0	4	4	31	35
S. E. Ohio	22	690	2	7	11	52	63
West Va.	28	44	4	17	18	109	127
Ttl. Feb.	178	941	8	30	47	248	295
Ttl. Jan.	202	548	17	31	54	268	322
Difference	24	393	9	1	7	20	27

MICHIGAN

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs.	Dig.	Ttl.
Alcona	0	0	0	0	1	1	2
Alpena	0	0	0	0	0	1	1
Antrim	1	0	1	0	0	0	0
Bay	0	0	0	0	1	0	1
Chippewa	0	0	0	0	0	1	1
Clinton	0	0	0	0	1	0	1
Clare	1	0	1	0	0	2	2
Eaton	0	0	0	0	0	1	1
Gladwin	1	0	1	0	2	5	7
Gratiot	1	0	0	1	1	8	9
Huron	0	0	0	0	0	1	1
Ionia	0	0	0	0	1	2	3
Isabella	2	270	0	1	3	8	11
Kent	0	0	0	0	0	2	2
Lake	0	0	0	0	0	2	2
Lenawee	0	0	0	0	0	2	2
Manistee	0	0	0	0	1	0	1
Mason	0	0	0	0	1	2	3
Mecosta	5	0	2	3	9	11	20
Midland	7	2,355	0	0	16	15	31
Monroe	0	0	0	0	0	2	2
Montcalm	6	2,000	2	2	27	33	60
Newago	1	0	1	0	0	2	2
Oceana	0	0	0	0	0	3	3
Ogemaw	6	510	1	0	7	13	20
Osceola	1	0	1	0	0	0	0
Saginaw	0	0	0	0	1	8	9
St. Clair	0	0	0	0	1	3	4
Shiawassee	0	0	0	0	1	2	3
Tuscola	1	10	0	0	4	0	4
Total Feb.	33	5,145	10	7	78	130	208
Total Jan.	41	5,940	16	6	70	94	164
Difference	8	795	6	1	8	36	44

CENTRAL WEST FIELDS

Summary of Field Operations

Field—	Comp.	Prod.	Dry	Gas
Lima field	3	1	2	0
Central Ohio	22	187	6	13
Indiana	9	15	7	1
Kentucky	5	538	1	0
Total February	39	741	16	14
Total January	74	1,404	26	25
Difference	35	663	10	11

CENTRAL OHIO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Ashland	1	0	0	1	3	2	5
Coshocton	0	0	0	0	3	5	8
Cuyahoga	1	55	0	0	0	1	1
Delaware	0	0	0	0	0	1	1
Fairfield	3	0	1	2	1	4	5
Gallia	0	0	0	0	0	4	4
Harrison	1	0	0	1	0	0	0
Hocking	1	32	0	0	1	3	4
Holmes	4	0	2	2	2	5	7
Huron	0	0	0	0	1	1	2
Lawrence	0	0	0	0	1	3	4
Lorain	0	0	0	0	3	5	8
Morgan	1	0	0	1	0	3	3
Perry	3	100	1	1	7	6	13
Pike	0	0	0	0	0	4	4
Richland	0	0	0	0	0	2	2
Scioto	0	0	0	0	0	1	1
Stark	3	0	1	2	3	23	26
Summitt	2	0	1	1	4	3	7
Tuscarawas	2	0	0	2	0	3	3
Wayne	0	0	0	0	3	4	7
Total Feb.	22	187	6	13	32	83	115
Total Jan.	22	118	4	14	27	70	97
Difference	0	69	2	1	5	13	18

LIMA FIELD

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs.	Dig.	Ttl.
Allen	0	0	0	0	1	3	4
Auglaize	0	0	0	0	0	3	3
Darke	0	0	0	0	0	3	3
Hancock	0	0	0	0	0	1	1
Hardin	2	0	2	0	1	1	2
Henry	0	0	0	0	0	2	2
Mercer	0	0	0	0	0	1	1
Ottawa	0	0	0	0	0	1	1
Sandusky	0	0	0	0	0	4	4
Seneca	1	1	0	0	0	2	2
Wood	0	0	0	0	0	3	3
Wyandot	0	0	0	0	1	5	6
Total Feb.	3	1	2	0	3	29	32
Total Jan.	8	1	4	3	2	19	21
Difference	5	0	2	3	1	0	1

INDIANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs.	Dig.	Ttl.
Daviess	0	0	0	0	0	2	2
Dearborn	0	0	0	0	0	1	1
Knox	2	0	2	0	0	1	1
Perry	2	0	2	0	0	5	5
Pike	1	0	0	1	0	2	2
Spencer	2	0	2	0	0	1	1
Vandenburgh	2	15	1	0	0	0	0
Total Feb.	9	15	7	1	0	12	12
Total Jan.	19	53	9	6	0	28	28
Difference	10	38	2	5	0	16	16

KENTUCKY

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs.	Dig.	Ttl.
McLean	5	538	1	0	0	1	1
Ohio	0	0	0	0	0	2	2
Total Feb.	5	538	1	0	0	3	3
Total Jan.	25	1,232	9	2	6	8	14
Difference	20	694	8	2	6	5	11

Rocky Mountain Fields

(Continued from Page 69)

test has been made. This well is a north offset to the same company No. 1 Lander which flowed as high as 2,000 bbls. a day from the Sunburst sand, which horizon was absent in No. 7 Tribal. Three wells drilled around the gusher have failed to pick up the big pay.

International Pipe Line Co. is taking up 35,000 feet of 4-inch line from the northern part of the field to the loading racks at Cut Bank and is replacing it with 6-inch line. American Pipe & Supply Co. has the contract.

Anderson et al No. 3 Anderson, NE SW NW sec. 26-35n-6w. Drlg 2,695 ft.

A. B. Cobb No. 5 Walberger, C NE NE sec. 35-36n-6w. Rig.

Cobb-Pardee No. 2 Morrison, CEL NE SE sec. 24-33n-6w. Rig; (cor. loc.).

Cobb-Pardee No. 1 Stufft, C SE NW sec. 25-36n-6w. T.D. 2,575 ft.; cmtd. 8¼-in. at 2,515 ft.

Consol. Gas Co. No. 1 Allotted-114, CNL NE SW sec. 31-33n-5w. R.U.

A. E. Crumley No. 1 Tribal, C SW SE sec. 31-33n-5w. Top Cut Bank 2,906 ft.; cmtd. 7-in. at 2,909 ft.

Dakota-Montana Oil Co. No. 1 Winkler, SW NE NW sec. 36-35n-6w. Drlg. 1,-775 ft.

Gardner et al No. 1 Cole, C NE SW sec. 3-32n-6w. S.D. 2,220 ft.

Goodman Oil Co. No. 1 Tribal, SW NW SW sec. 25-33n-6w. Drlg. 1,650 ft.

Hannah-Porter Co. No. 1 Allotted-130, C Lot 3, sec. 6-32n-5w. Cellar and sump.

B. V. Hole No. 1 Tribal, C NW SW sec. 33n-6w. Cellar.

B. V. Hole No. 1 Allotted-124, 640 ft. out of NE cor. sec. 1-32n-6w. Loc.

L. P. Jackson et al No. 1 Tribal, NW SE NW sec. 23-34n-7w. Drlg. 723 ft.

R. C. Jeffries No. 4-A Lukens, NE NE NE sec. 12-33n-6w. Drlg. 850 ft.; Colo. 560-65 ft.; 10-in. 603 ft.

R. C. Jeffries No. 4 Lukens, NE NE NE sec. 12-33n-6w. Abd.; junked hole at 2,610 ft.; skdg. rig.

Jack Marshall No. 1 Tribal-120, Lot 7, sec. 7-32n-5w. T.D. 2,915 ft.; fsg.

Kately No. 3 Drumheller-Ward, C Lot 2, sec. 10-34n-6w. Drlg. 1,350 ft.

Montana Headlight Oil Co. No. 3 Britton, NE NE SE sec. 11-34n-6w. Drlg. 1,750 ft.

Montana Power Gas Co. No. 2 Van Ormer, C SE SE sec. 8-33n-5w. Colo. 510 ft.; 10-in. 522 ft.

Montana Power Gas Co. No. 1 Warfield unit, CWL SW sec. 9-33n-5w. Colo. 630 ft.; 10-in. 643 ft.

Montana Power Gas Co. No. 1 Carrigeaux, 125 ft. W of C NE NW sec. 28-33n-5w. Spudding.

Nadeau Bros. No. 2 Farmers State Bank, C SW NE sec. 17-33n-5w. Drlg. 230 ft.

Par Oil Co. No. 6 Haines, NE SW NE sec. 3-34-6w. Running 7-in. at 2,725 ft. to S.O. water in sand.

Santa Rita O. & G. Co. No. 1 Shearon, 660 ft. S of N line and 349 ft. W of E line, sec. 34-36n-6w. T.D. 3,092 ft.; U.R. 7-in. at 2,960 ft.

Santa Rita O. & G. Co. No. 1 Barrington, SE SW NW sec. 24-33n-6w. Running 7-in. at 2,860 ft.

Neil Spencer No. 2 Tweedy, 925 ft. NS line, 1,980 ft. 2 WL SE sec. 25-33n-6w. Drlg. 410 ft.

R. C. Tarrant No. 6 Britton, C SE SW sec. 12-34n-6w. Spdg. 350 ft.

R. C. Tarrant No. 2 Reikhoff, SE NE SE sec. 3-34n-6w. Drlg. 1,760 ft.

Texas Co. No. 2-B Allotted-122, SE NW NW sec. 6-32n-5w. Drlg. 777 ft.; 10¾-in. at 347 ft.

Texas Co. No. 1 Walker, C NE NE sec. 2-35n-6w. T.D. 3,000 ft., C.O. and prep. to run rods and tubing.

Texas Co. No. 2, Unit 9, C SW NE sec. 9-33n-5w. Loc. (first report.)

Texas Co. No. 1-A Tribal, C SW NE sec. 36-33n-6w. Top Cut Bank 2,926 ft.; 7-in. cmtd. at 2,968 ft.

Whetstone et al No. 1 Tribal, C SE NW sec. 36-33n-6w. Drlg. 2,700 ft.

Wilkinson et al No. 1 Tribal, Tr. 127, C NE NE sec. 1-32n-6w. Bldg. rig.

Wilkinson et al No. 1 Tribal, Tr. 15, C NE NW sec. 7-32n-5w. R.U.

Petroleum County

West Dome Oil Co. No. 1, SW SE NE sec. 9-15n-29e. Drlg. 1,293 ft.; first Cat Creek at 1,240-88 ft.; (est. 5 bbls.); cased off with 5 3/16-in. at 1,290 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. Drlg. 431 ft.

Pondera County

Wm. M. Fulton No. 1 Price, SW NE NE sec. 18-27-4w. T.D. 1,710 ft. (cor.); drlg. by tools.

Norden Corp., Ltd., No. 1 Hollan, NW SW NW sec. 12-28-6w. Drlg. 700 ft.; recmtd. 13¼-in. at 585 ft.

Warren Hastings No. 2 Erickson, NW SW NW sec. 10-27n-4w. R.U.

Texas Co. No. 1 Valier Unit No. 1, C NW SE sec. 32-31n-5w. Spdg. 250 ft. cable tools.

Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. Spdg. 150 ft.

Jones-Chambers No. 1 Erickson, SW SE SW sec. 3-27-4w. Rig timbers on loc.

Teton County

R. C. Tarrant has made a location for another test in the Pendroy, or West Pondera district in his No. 1 Wallenstein, NW corner SW section 9-27n-5w, 1¾ miles north of Ned Cheadle's No. 1 Balsinger, NE SE NW section 20-27-5w, which was abandoned in 1934 in the Madison at 2,554 feet. The Tarrant test is in the center of a block of 6,000 acres.

Toole County

One well was completed and two locations released in the Kevin-Sunburst field. A. E. Crumley's No. 8 Shaw, SE NW SE section 35-36-2w, was drilled to 1,569 feet and completed in the Sunburst at 1,530-60 feet. Oil rose 800 feet and it is estimated at 40 to 50 bbls. It was shot with 60 quarts and is cleaning out.

T. P. Kyle has announced that he will drill another test in the Bow and Arrow field in section 3-37n-1e, only a mile or two from the Canadian border. Last year he brought in the discovery well in the SW NW SE section 24-37-1e, which made 4,600,000 feet of gas initial from sand at 2,065-80 feet.

A. E. Crumley No. 2 O'Haire, NW SE SE sec. 35-36n-2w. Loc. (first report).

A. E. Crumley No. 6 Fryberger, NE SE SE sec. 24-35n-3w. Spdg. (first report.)

Agen & Goedderts No. 1, C SE NE sec. 16-35n-3w. Loc.

Big West Oil Co. No. 1 Dalquist, SW NE NW sec. 21-35n-3w. Loc.

Carscallen & Mitchener No. 1 Krueger, 1,-320 ft. W of E line, 1,980 ft. S of N line, sec. 10-34n-2w. T.D. 1,650 ft.; acidized; did not recover load.

Coolidge & Coolidge No. 1 State, NW NW NW sec. 36-36n-2w. Drlg. 1,300 ft.

Continental Oil Co. No. 7 State, SE NE NE sec. 16-35n-2w. Loc.

Continental Oil Co. No. 8 State, NE SE NE sec. 16-35n-2w. Loc.

Continental Oil Co. No. 9 State, SE SW NE sec. 16-35n-2w. Loc.

Eddy & Engleking No. 1 Sohn, SW SW NE sec. 26-36n-3w. T.D. 900 ft.; fsg.

Fraser & Smith No. 1 Crabtree, NE NE SE sec. 14-34n-2w. Drlg. 400 ft.

Fraser & Smith No. 1 Crabtree, NE NE SE sec. 14-34n-2w. Spdg. 100 ft.

Imperial-Craig Oil Co. No. 3 Martin, CEL SW SE sec. 18-35n-1w. Resuming at 1,360 ft.

Monopeg Oils, Ltd., No. 3 Dipple, CSL SW NW sec. 28-35n-1w. T.D. 1,450 ft.; R.U. to drill in.

Burt Smith No. 1 Engel, SE SE NE sec. 2-35n-2w. Drlg. 800 ft.

Welch Bros. No. 1 Dewald, SW NE NE sec. 26-35n-2w. Drlg. 800 ft.

UTAH

Grand County

Columbia Crude Co. No. 1 Rath, SW SE sec. 12-35n-20e. Drlg. 350 ft.

Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22e. S.D. 4,600 ft. for sand line.

Glenn Ruby et al No. 1 State, NE SE SE sec. 34-31s-16e. Drlg. 1,509 ft. in Chinlee sh.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 16-8s-5e. S.D. 3,591 ft.; rebldg. road after landslide.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 11 Capitan, Santa Barbara Co.	32- 5-30	2,789	C.P. 1,709
Shell Oil Co., No. 12 Capitan, Santa Barbara Co.	32- 5-30	2,600	rig to pump
Shell Oil Co., No. 13 Capitan, Santa Barbara Co.	32- 5-30	780	sd. sh. drlg.
Shell Oil Co., No. 14 Capitan, Santa Barbara Co.	32- 5-30	952	sd. sh. drlg.
Honolulu Oil Corp., No. 9 Elwood, Santa Barbara Co.	tideland	7,014	reaming 6,130
Barnsdall-Rio Grande, No. 9 Elwood, Santa Barbara.	tideland	3,568	deepening
Barnsdall-Rio Grande, No. 12 Elwood, Santa Barbara	15- 4-29	8,506	fish. D.P.
York Oil Co., No. 3 Lompoc, Santa Barbara Co.	33- 8-34	....	rigging up
Union Oil Co., No. 16 Orcutt, Santa Barbara Co.	26- 9-34	3,087	br. sh. drlg.
Fairview Oil Co., No. 1 Purisima, Santa Barbara Co.	18- 7-34	4,060	fish. D.P.
Santa Barbara Oil, No. 1 Carpinteria, Santa Barbara	29- 4-25	2,290	P.B. 1,950
Cornero, Tony, No. 1 Carpinteria, Santa Barbara Co.	8- 4-25	876	sd. sh. drlg.
Bankline Oil Co., No. 1 Coal Oil Pt., Santa Barbara	tideland	5,510	redrlg. 694
Anacapa Oil Co., No. 4 Mesa, Santa Barbara Co.	28- 4-27	1,151	sd. sh. drlg.
Calco Pet. Co., No. 1 Las Posas, Ventura Co.	17- 3-20	3,201	sd. sh. drlg.
Union Oil Co., No. 10 Bardsdale, Ventura Co.	12- 3-20	6,055	swabbing
Pet. Securities Co., No. 1 Bardsdale, Ventura Co.	7- 3-19	3,479	will deepen
Bankline Oil Co., No. 1 Sespe, Ventura Co.	36- 5-20	2,882	dry; abd.
Ivers, H. A., No. 12 Sespe, Ventura Co.	1- 4-20	1,757	pump. 100 b.d.
Wasibi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	....	rigged up
Laing & Jacobs, No. 1 Shiells Canyon, Ventura Co.	32- 4-19	1,275	fishing
El Rancho Oil Co., No. 1 Shiells Canyon, Ventura Co.	9- 3-19	4,041	bailing
Bestco Pet. Co., No. 1 Shiells Canyon, Ventura Co.	2- 3-19	1,798	hd. sd. drlg.
Bankline Oil Co., No. 1 Shiells Canyon, Ventura Co.	3- 3-19	4,200	sd. sh. drlg.
Petroleum Securities, No. 1 Shiells Canyon, Ventura Co.	3- 3-19	2,972	hd. sh. drlg.
The Texas Co., No. 129 Shiells Canyon, Ventura Co.	4- 3-19	4,812	P.B. 4,260
The Texas Co., No. 130 Shiells Canyon, Ventura Co.	4- 3-19	....	bldg. rig
Hull, James, No. 1 Santa Susana, Ventura Co.	2- 2-18	1,791	recmtd.
Bolsa Chica Oil Co., No. 3 Temescal, Ventura Co.	4- 4-18	1,551	br. sh. drlg.
Johnson, R. P., No. 1 Temescal, Ventura Co.	21- 4-18	1,673	will redrl.
General Pet. Corp., No. 2 Oxnard, Ventura Co.	26- 2-23	6,374	sd. sh. drlg.
Rincon Oil Co., No. 3 Rincon, Ventura Co.	tideland	1,903	sd. sh. drlg.
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	1,897	sd. sh. drlg.
C. C. M. Oil Co., No. 1 Javon, Ventura Co.	15- 3-24	....	bldg. rig
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-26	6,314	cleaning out
Richfield Oil Co., No. 2 Devil's Den, Kern Co.	14-25-18	2,501	cleaning out
Cumberland Oil Co., No. 1 Devil's Den, Kern Co.	17-26-18	4,700	form. test
Calcrude Pet. Co., No. 1 McKittrick, Kern Co.	34-30-22	791	hd. sh. drlg.
Bergman Oil Co., No. 1 McKittrick, Kern Co.	32-29-22	....	rigged up
Welport Oil Co., No. 14 McKittrick, Kern Co.	26-29-21	1,501	sd. sh. drlg.
Standard Oil Co., No. 4 North Belridge, Kern Co.	36-27-20	6,582	br. sh. drlg.
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	5,751	cleaning out
Beiridge Oil Co., No. 6-1 North Belridge, Kern Co.	1-28-20	8,110	cmtd. 8,090
Beiridge Oil Co., No. 17-35 North Belridge, Kern Co.	35-27-20	6,075	sd. sh. drlg.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,492	P.B. 9,340
Union Oil Co., No. 21 North Belridge, Kern Co.	36-27-20	5,298	sd. sh. drlg.
Continental Oil Co., No. 7 North Belridge, Kern Co.	36-27-20	7,498	hd. sh. drlg.
C. C. M. Oil Co., No. 17 Kern Front, Kern Co.	23-28-27	1,579	sd. sh. drlg.
Republic Pet. Co., No. 10 Kern Front, Kern Co.	24-28-27	1,162	sd. sh. drlg.
Republic Pet. Co., No. 11 Kern Front, Kern Co.	11-28-27	....	bldg. rig
L. & H. Prop., Inc., No. 1 Kern Front, Kern Co.	13-28-27	....	bldg. rig
Lloyd Oil Co., No. 1 Kern Front, Kern Co.	3-28-27	2,461	resume work
National Oil Co., No. 5 Kern Front, Kern Co.	1-28-27	965	sd. sh. drlg.
National Oil Co., No. 6 Kern Front, Kern Co.	11-28-27	....	bldg. rig
National Oil Co., No. 7 Kern Front, Kern Co.	11-28-27	....	bldg. rig
Kern River Oilfields, No. 7 Kern Front, Kern Co.	25-28-27	2,045	pump 180 b.d.
Associated Oil Co., No. 6 Kern Front, Kern Co.	4-28-27	2,840	dry; abd.
Associated Oil Co., No. 7 Kern Front, Kern Co.	23-28-27	....	bldg. rig
Standard Oil Co., No. 12 Kern Front, Kern Co.	9-28-27	2,852	cmtd. 2,680
Standard Oil Co., No. 13 Kern Front, Kern Co.	24-28-27	2,014	rig to pump
Standard Oil Co., No. 14 Kern Front, Kern Co.	15-28-27	....	bldg. rig
The Texas Co., No. 15 Kern Front, Kern Co.	23-28-27	2,180	pump. 230 b.d.
Union Oil Co., No. 8 Kern Front, Kern Co.	11-28-27	850	sd. sh. drlg.
Webber, T. A., No. 1 Kern Front, Kern Co.	16-28-27	365	will deepen
Ausbrit Oil Co., No. 1 Premier, Kern Co.	20-27-27	2,139	will P.B.
Unger, M., No. 1 Dominion, Kern Co.	27-26-28	1,425	cmtd.
Santa Clara Oil Co., No. 1 Mount Poso, Kern Co.	7-26-28	1,850	cleaning out
McMahan, Hugh, No. 1 Mount Poso, Kern Co.	27-26-28	1,581	P.B. 1,537
Union Oil Co., No. 11 Mount Poso Tribe, Kern Co.	28-27-28	....	bldg. rig
Vanguard Oil Co., No. 4 Mount Poso, Kern Co.	32-27-28	1,788	cmtd. 1,712
General Pet. Corp., No. 13 Mount Poso Heisen, Kern	16-27-28	....	bldg. rig
Tilton & Harp., No. 1 Mount Poso, Kern Co.	6-27-28	....	rigging up
Union Oil Co., No. 1 Poso Outpost, Kern Co.	34-27-28	1,900	sd. sh. drlg.
Dixie Lee Oil Co., No. 2 Fruitvale, Kern Co.	2 -29-27	1,755	cleaning out
Connelly, T. E., No. 1 Fruitvale, Kern Co.	21-29-27	1,021	sd. sh. drlg.
Mosebach Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	985	sd. sh. drlg.
Trico Oil & Gas Co., No. 1 Fruitvale, Kern Co.	23-29-27	....	rigging up
Magnet Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,069	bailing
Heim & Pruitt, No. 1 Round Mountain, Kern Co.	27-29-27	3,445	recmtd. 3,400
Western Gulf Oil Co., No. 25 Fruitvale, Kern Co.	27-29-27	1,131	sd. sh. drlg.
Mohawk Oil Co., No. 10 Fruitvale, Kern Co.	28-29-27	3,780	cmtd. 3,704
Hogan Pet. Co., No. 12 Mountain View, Kern Co.	32-30-29	6,095	sd. sh. drlg.
Hogan Pet. Co., No. 13 Mountain View, Kern Co.	33-30-29	5,181	sd. sh. drlg.
Hogan Pet. Co., No. 14 Mountain View, Kern Co.	32-30-29	3,120	sd. sh. drlg.
Buffalo Oil Co., No. 3 Mountain View, Kern Co.	19-30-29	1,892	sd. sh. drlg.
Mohawk Oil Co., No. 16 Mountain View, Kern Co.	30-30-29	6,055	sd. sh. drlg.
Mohawk Oil Co., No. 18 Mountain View, Kern Co.	30-30-29	5,985	completing
Mohawk Oil Co., No. 19 Mountain View, Kern Co.	30-30-29	....	rigging up
Ohio Oil Co., No. 3 Mountain View, Kern Co.	33-30-29	5,860	recmtd. 5,087
Allied Pet. Corp., No. 1 Mountain View, Kern Co.	19-30-29	5,165	redrlg. 4,980
Union Oil Co., No. 5 Mountain View, Kern Co.	23-30-28	5,622	P.B. 5,527
Hancock Oil Co., No. 10 Mountain View, Kern Co.	14-30-28	....	grade
Treasure Oil Co., No. 1 Mountain View, Kern Co.	12-30-28	2,160	sd. sh. drlg.
Jergins Trust, No. 8 Mountain View, Kern Co.	19-30-29	....	rigging up
Shell Oil Co., No. 8 Mountain View, Kern Co.	32-30-29	5,818	swabbing
Shell Oil Co., No. 9 Mountain View, Kern Co.	32-30-29	5,996	cleaning out
Shell Oil Co., No. 10 Mountain View, Kern Co.	32-30-29	5,940	swabbing
Shell Oil Co., No. 11 Mountain View, Kern Co.	32-30-29	....	rigged up
Vesta Pet. Co., No. 10 Mountain View, Kern Co.	19-30-29	....	rigging up
Standard Oil Co., No. 26 Mountain View, Kern Co.	13-30-28	4,594	sd. sh. drlg.
R. & R. Dev. Co., No. 1 Arvin, Kern Co.	32-30-30	930	sd. sh. drlg.
Ohio Oil Co., No. 1 Rio Bravo, Kern Co.	1-30-25	5,860	sd. sh. drlg.
Shell Oil Co., No. 1 Stevens, Kern Co.	29-30-26	7,888	Miocene O.S.
Helm & Pruitt, No. 1 Round Mountain, Kern Co.	17-28-29	2,175	dry; abd.
Round Mountain Oil, No. 2 Round Mountain, Kern Co.	19-28-29	1,913	gr. sd. wet
Shell Oil Co., No. 4 Round Mountain, Kern Co.	7-28-29	1,851	sd. sh. drlg.
Shell Oil Co., No. 5 Round Mountain, Kern Co.	7-28-29	1,486	cmtd. 1,484
Shell Oil Co., No. 7 Round Mountain, Kern Co.	7-28-29	....	bldg. rig
Honolulu Oil Corp., No. 15 Round Mountain, Kern Co.	18-28-29	1,880	flow. 320 b.d.
Honolulu Oil Corp., No. 16 Round Mountain, Kern Co.	18-28-29	2,100	completing
Honolulu Oil Corp., No. 17 Round Mountain, Kern Co.	18-28-29	....	rigging up
Honolulu Oil Corp., No. 18 Round Mountain, Kern Co.	20-28-29	....	grade
M. & L. Oil Co., No. 1 Edison, Kern Co.	23-30-29	2,011	bailing
Jergins Trust, No. 22 Edison, Kern Co.	23-30-29	4,320	sd. sh. drlg.
Jergins Trust, No. 23 Edison, Kern Co.	23-30-29	3,287	P.B. 2,675
Buckeye Union Oil Co., No. 1 Edison, Kern Co.	22-30-29	4,257	Schist; idle
Buffalo Oil Co., No. 2 Edison, Kern Co.	24-30-29	542	sd. sh. drlg.
Whittier-Santa Fe Oil Co., No. 1 Edison, Kern Co.	21-30-29	3,279	pump. 123 b.d.
Monterey Expl. Co., No. 5 Edison, Kern Co.	14-30-29	2,699	P.B. 2,306
General Pet., No. 14 Edison, Kern Co.	24-30-29	1,458	rig to pump
General Pet., No. 16 Edison, Kern Co.	10-30-29	....	rigging up
General Pet., No. 17 Edison, Kern Co.	21-30-29	1,320	sd. sh. drlg.
Pioneer Holding Co., No. 2 Edison, Kern Co.	17-30-30	....	rigging up
General Pet. Corp., No. 1 Elk Hills, Kern Co.	5-30-24	6,149	P.B. 6,050
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	465	sd. sh. drlg.
Gibson Oil Co., No. 3 Maricopa, Kern Co.	6-11-23	2,392	redrlg. 1,690
Gibson Oil Co., No. 4 Maricopa, Kern Co.	6-11-23	3,002	flow. 1,150 b.d.
Chief Oil Co., No. 2 Maricopa, Kern Co.	6-11-23	2,665	O.S. drlg.
General Pet. Corp., No. 1 Maricopa, Kern Co.	6-11-23	2,827	recmtd. 2,674
Shell Oil Co., No. 1 Maricopa, Kern Co.	7-11-23	....	rigging up
Standard Oil Co., No. 24 Midway-Sunset, Kern Co.	36-12-24	2,702	cmtd. 2,444
Standard Oil Co., No. 25 Midway-Sunset, Kern Co.	36-12-24	2,106	cleaning out
Standard Oil Co., No. 65 Midway-Sunset, Kern Co.	36-12-24	1,986	br. sh. drlg.
Standard Oil Co., No. 54 Midway-Sunset, Kern Co.	33-32-24	3,121	gr. sh. drlg.
Standard Oil Co., No. 219 Midway-Sunset, Kern Co.	33-32-24	....	bldg. rig
Quality Oil Co., No. 2 Midway-Sunset, Kern Co.	22-32-23	1,530	sd. sh. drlg.
Alford Oil Co., No. 5 Maricopa, Kern Co.	4-32-23	....	rigging up
McAdams, Ed., No. 1 Midway-Sunset, Kern Co.	23-32-23	1,575	sd. sh. drlg.
Obispo Oil Co., No. 12 Midway-Sunset, Kern Co.	32-12-23	....	rigging up
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	31-12-23	4,128	P.B. 3,521
Ohio Oil Co., No. 6 Buena Vista Lake, Kern Co.	32-31-26	4,676	testing
Superior Oil Co., No. 1 Buena Vista Lake, Kern Co.	6-32-25	4,900	redrlg. 4,364
Ohio Oil Co., No. 1 Tejon, Kern Co.	36-11-19	....	bldg. rig
Reserve Oil Co., No. 1 Tejon, Kern Co.	33-11-19	6,032	cleaning out
Signal Oil Co., No. 1 Comanche, Kern Co.	30-32-30	....	bldg. rig
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-29	2,397	hd. sd. drlg.
Seaboard Oil Co., No. 4 Huron, Fresno Co.	10-16-13	3,998	gr. sh. drlg.
Western Gulf, No. 2 Cantua, Fresno Co.	3-17-15	3,100	fish. D.P.
Conlon, J. M., No. 1 Coalinga, Fresno Co.	30-19-15	881	sd. sh. drlg.
Standard Oil Co., No. 1 South Coalinga, Fresno Co.	36-21-14	1,130	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	P.B. 10,729
K. N. D. A., No. 2 Kettleman North, Fresno Co.	20-21-17	7,497	br. sh. drlg.
K. N. D. A., No. 74 Kettleman North, Fresno Co.	30-21-17	5,755	sd. sh. drlg.
K. N. D. A., No. 81 Kettleman North, Fresno Co.	24-21-16	....	bldg. rig
K. N. D. A., No. 36 Kettleman North, Kings Co.	36-22-18	9,733	P.B. 9,065
Standard Oil Co., No. 25 Kettleman North, Fresno Co.	19-21-17	5,215	sd. sh. drlg.
Standard Oil Co., No. 56 Kettleman North, Fresno Co.	19-21-17	....	rigging up
Standard Oil Co., No. 65 Kettleman North, Fresno Co.	19-21-17	6,440	sd. sh. drlg.
Standard Oil Co., No. 72 Kettleman North, Fresno Co.	19-21-17	6,290	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg., or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Standard Oil Co., No. 2 Kettleman Middle, Kings Co.	29-23-19	8,781	sd. sh. drlg.
Kettleman View Oil Co., Well No. 1, Kings Co.	29-23-19	1,629	gas blow out
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings	21-22-20	2,495	sd. sh. drlg.
Union-Hancock, No. 1 Tulare Lake, Kings Co.	28-22-20	5,358	dry; abd.
Pismo Pet. Corp., No. 1 Pismo, San Luis Obispo Co.	5-32-13	2,942	cmtd. 2,875
Emerich Oil Co., No. 1 Cholame, San Luis Obispo Co.	22-32-22	1,906	will deepen
United Oil Co., No. 1 Cholame, San Luis Obispo Co.	2-32-21	380	sd. sh. drlg.
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	2,102	sd. sh. drlg.
Martin, J. D., No. 5 Pismo, San Luis Obispo Co.	5-32-13	1,820	sd. sh. drlg.
Barnsdall Oil, No. 1 Carissa Plains, San Luis Obispo	24-28-17	2,941	sd. sh. drlg.
Holly Dev. Co., No. 1 Tracy, San Joaquin Co.	16- 2-5	....	rigging up
Standard Oil Co., No. 1 McDonald Island, San Joaquin	25- 2-4	4,270	shows gas
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24-3	7,324	sd. sh. drlg.
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	8,220	sd. sh. drlg.
Kenwood Pet. Corp., No. 1 Ducor, Tulare Co.	14-24-27	1,623	dry; abd.
The Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	4,557	fish. D.P.
Amerada Pet. Co., No. 1 Emigh, Solano Co.	26- 4-2	855	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Republic Pet. Co., No. 2 El Segundo, Los Angeles Co.	18- 3-14	7,477	cmtd. 7,355
Marvin, J. L., No. 1 El Segundo, Los Angeles Co.	7- 3-14	7,191	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co.	10- 3-14	3,841	rigging up
Shell Oil Co., No. 1 Moneta, Los Angeles Co.	33- 3-14	7,352	P.B. 4,309
Alleghany Pet. Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	....	bldg. rig
White Five Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,886	P.B. 3,790
White Five Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	....	bldg. rig
Linderman, G. K., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,215	test. W.S.O.
Regent Oil Co., No. 1 Torrance, Los Angeles Co.	6- 4-14	....	rigging up
Sterling Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	3,877	cleaning out
Roach, W. C., No. 1 Torrance, Los Angeles Co.	31- 3-14	1,581	sd. sh. drlg.
Walker Oil Co., No. 1 Torrance, Los Angeles Co.	5- 4-14	1,583	sd. sh. drlg.
Dumas-Brown Oil Co., No. 1 Torrance, Los Angeles Co.	6- 4-14	....	rigging up
Southwestern Pet. Corp, No. 1 Torrance, Los Angeles	31- 3-14	....	bldg. rig
B. & N. Oil Co., No. 1 Torrance, Los Angeles Co.	18- 4-14	3,396	cleaning out
Langstaff Pet. Corp., No. 1 Torrance, Los Angeles Co.	31- 3-14	....	bldg. rig
Lawler Pet. Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	....	rigging up
Macvan Oil Co., No. 1 Torrance, Los Angeles Co.	31- 3-14	1,471	sd. sh. drlg.
Redondo Oil Corp., No. 1 Torrance, Los Angeles Co.	31- 3-14	962	sd. sh. drlg.
Tu-Jax Oil Co., No. 1 Torrance, Los Angeles Co.	32- 3-14	2,180	sd. sh. drlg.
Continental Royalties, No. 1 Torrance, Los Angeles Co.	32- 3-14	....	bldg. rig
Rennek Oil & Gas Co., No. 1 Torrance, Los Angeles Co.	5- 4-14	3,448	pump. 205 b.d.
C. C. M. Oil Co., No. 23 Torrance, Los Angeles Co.	8- 4-14	4,840	cleaning out
West American Oil Co., No. 1 Dominguez, Los Angeles	3- 4-13	8,231	sd. sh. drlg.
Union Oil Co., No. 8 Dominguez Carson, Los Angeles	33- 3-13	5,882	sd. sh. drlg.
Shell Oil Co., No. 1 Long Beach, Los Angeles Co.	13- 4-13	6,389	P.B. 957
Barnsdall Oil Co., No. 15 Rosecrans, Los Angeles Co.	18- 3-13	4,955	redrlg. 4,870
Mars Oil Co., No. 1 Athens, Los Angeles Co.	7- 3-13	4,850	P.B. 3,968
Associated Oil Co., No. 18 Seal Beach, Los Angeles Co.	11- 5-12	4,796	sd. sh. drlg.
Standard Oil Co., No. 27 Seal Beach, Los Angeles Co.	3- 5-12	5,084	sd. sh. drlg.
Engler & Long, No. 1 Artesia, Los Angeles Co.	23- 3-12	5,888	P.B. 5,100
Ohio Oil Co., No. 18 Del Rey, Los Angeles Co.	22- 2-15	6,380	pump 140 b.d.
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	7,239	gas blow out
Royalty Service Corp., No. 6 Del Rey, Los Angeles Co.	22- 2-15	6,404	351 b.d.
Union Oil Co., No. 21 Del Rey, Los Angeles Co.	27- 2-15	6,061	cmtd. 6,011
Union Oil Co., No. 22 Del Rey, Los Angeles Co.	27- 2-15	....	bldg. rig
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	2,023	hd. sd. drlg.
Yant Pet. Corp., No. 2 Newhall, Los Angeles Co.	36- 4-16	....	rigged up
Eyer Pet. Co., No. 1 Compton, Los Angeles Co.	20- 4-13	3,794	pump. 100 b.d.
Harbor Pet. Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	....	rigging up
Sovereign Oil Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,663	P.B. 3,535
Codri Oil Co., No. 1 Wilmington, Los Angeles Co.	29- 4-13	3,568	sd. sh. drlg.
General Pet. Corp., No. 1 Wilmington, Los Angeles	4- 5-13	....	bldg. rig
Standard Oil Co., No. 79 Montebello, Los Angeles Co.	2- 2-12	6,243	sd. sh. drlg.
Standard Oil Co., No. 81 Montebello, Los Angeles Co.	2- 2-12	3,750	hd. sd. drlg.
Standard Oil Co., No. 82 Montebello, Los Angeles Co.	2- 2-12	7,442	hd. sd. drlg.
Standard Oil Co., No. 83 Montebello, Los Angeles Co.	2- 2-12	3,270	testing
Womac, Inc., No. 3 Montebello, Los Angeles Co.	4- 2-11	3,164	rig to pump
Woodward, J. A., No. 1 Montebello, Los Angeles Co.	4- 2-11	3,660	hd. sd. drlg.
The Texas Co., No. 13 Montebello, Los Angeles Co.	5- 2-11	7,312	P.B. 6,914
Universal Consd., No. 6 Montebello, Los Angeles Co.	5- 2-11	4,991	sd. sh. drlg.
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	6,352	cmtd. 5,720
Richfield Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	4,681	sd. sh. drlg.
Richfield Oil Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	3,484	sd. sh. drlg.
North American, No. 2 Montebello, Los Angeles Co.	5- 2-11	5,652	hd. sd. drlg.
St. Helens Pet. Co., No. 7 Montebello, Los Angeles Co.	5- 2-11	2,553	hd. sh. drlg.
Oil & Gas Associates, No. 1 Pico, Los Angeles Co.	9- 2-11	4,281	repair mach.
McVicar & Rood, No. 1 San Jose Hills, Los Angeles Co.	6- 2-9	....	rigging up
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	2,266	hd. sd. drlg.
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	2,130	sd. sh. drlg.
Terry, George, No. 1 Westminster, Orange Co.	17- 5-11	....	rigging up
Hillman & Long, No. 1 Westminister, Orange Co.	14- 5-11	7,142	sd. sh. drlg.
West American Oil Co., No. 1 East Coyote, Orange Co.	24- 3-10	....	bldg. rig
Union Oil Co., No. 29 Chapman Richfield, Orange Co	30- 3-9	2,973	sd. sh. drlg.
Union Oil Co., No. 31 Chapman Richfield, Orange Co.	30- 3-9	1,031	sd. sh. drlg.
Union Oil Co., No. 32 Chapman Richfield, Orange Co.	30- 3-9	....	rigging up
Continental Oil Co., No. 1 Yorba, Orange Co.	21- 3-9	4,796	P.B. 2,492

KANSAS

(Week Ending May 2. Descriptions are East unless marked otherwise)

Barton County

Arch E. Merriam No. 1 Soeken, SW SW SE sec. 27-17-11w. K.C. 2,994 ft.; S.D. 3,210 ft.

Buchanan & Alexander No. 1 Langfeld NE NE SW sec. 14-20-11w. K.C. 3,022 ft. T.D. 3,290 ft.; 2,500 ft. oil in hole.

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w. S.D. 63 ft.

Davison et al No. 1 Birzer, SW SE SW sec. 22-17-12w. Anhydrite 760 ft.; C.O. 1,905 ft.

Morgan & Flynn et al No. 1 Zimmer, SE SE SW sec. 20-19-14w. Drlg. 3,575 ft.

Murphy & Morgan No. 1 Robinson, NE NE SW sec. 21-16-14w. Drlg. 3,455 ft.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. Rig.

Rose Spring Drlg. Co. et al No. 1 Rick, SW cor. sec. 1-19-11w. Cellar.

Roy Ramsey et al No. 1 Hunt, NW cor. sec. 10-18-11w. Siliceous 3,382 ft.; T.D. 3,404 ft.; est. 25 bbls. oil per day. P.B. 3,402 ft.; acidized; no test.

Schermerhorn Oil Co. No. 1 Hunter, NE cor. sec. 29-18-15w, fsg. 2,710 ft.

Simpson & Noble and Atlantic Oil Producing Co. No. 1 Hiss, C NW NE sec. 31-20-13w. Anhydrite 783 ft.; K.C. 3,205 ft.; T.D. 3,287 ft.; 2,200 ft. oil in hole in 10 hours.

Torry & Feaster No. 1 Feist, NE NE SE sec. 29-18-11w. Siliceous lime 3,430-32½ ft.; T.D.; potential; pumped 346 bbls. oil in 18¼ hrs.

Wakefield & Johnson No. 1 Bumm, SW SW NE sec. 32-19-12w. S.D. 332 ft.

Butler County

Dalton et al No. 1 Miley, C SW NE sec. 17-27-5. Machine.

Ellis et al No. 1-A Pettit, SE SE NW sec. 21-28-6. Set 15-in. csg. 375 ft.

McGinnis et al No. 1 Hinnen, NE NE SW sec. 18-24-4. R.U. machine.

Sanford et al No. 1 Weaver Est., SE SE NE sec. 11-28-5. Set 12-in. csg. 1,618 ft.

Cowley County

Baden Prod. Co. No. 1 Sparks, SE SW NW sec. 35-33-4. R.U.

Craft et al No. 1 Whitson, NE NE NE sec. 20-33-4. Drlg. 50 ft.

DeGenther Oil Co. No. 1 Holt, NW NW SE sec. 15-30-5. R.U.

W. M. McKnabb No. 1 Community, C NE NW sec. 14-34-3. Rig.

D. D. Mickleson et al No. 1 Wallace, SW SE SE sec. 10-33-4. Spudded.

A. D. Morton et al No. 1 Roger, SE SE NE sec. 1-31-4. Spudded and S.D.

Penwest Oil Co. No. 1 Clover, NE SE SE sec. 8-31-7. 19,000,000 ft. gas 1,430-60 ft.; Siliceous 3,177 ft.; T.D. 3,182 ft.; showing water; P.B. 1,460 ft.; 8,000,000 ft. gas. Comp.

Roth & Faurot No. 1 Guthrie, NW cor. Lot 14, sec. 30-33-8. H.F.W. 3,146 ft. W.O.C.

Trees Oil Co. No. 1 Simpson, C NE NW sec. 3-30-4. Rigging up.

Wakefield et al No. 1 Daniels, SE SW SE sec. 3-30-3. Drlg. 225 ft.

Edwards County

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Drlg. 2,414 ft.

Ellis County

Empire O. & R. Co. No. 1 Herl, SE cor. sec. 22-15-19w. Rigging up.

Bridgeport Machine Co. et al No. 1 Madden Est., NE NW NW sec. 26-15-18w. Anhydrite 1,110 ft. Set 10-in. csg.

Brunson & Ewers-Simpson No. 1 Gross, NE NE SW sec. 29-14-17w. Anhydrite 1,110 ft.; T.D. 2,595 ft. Setting 8-in. csg.

Harris & Haun et al No. 1 Schmeidler, SE SE SW sec. 3-13-17w. Drlg. 835 ft.

Jones Bros. & Carpenter et al No. 1 Solomon, SE SE SW sec. 23-11-19w. Anhydrite 1,408 ft.; drlg. 2,475 ft.

Lario Oil & Gas et al No. 1 Walter, SE NE SW sec. 3-12-18w. Anhydrite 1,314 ft.; drlg. 2,923 ft.

Muth et al No. 1 Penney, SW SW SE sec. 29-14-18w. M.I.M.

Tom Palmer No. 1 Schoenthaler, NE NE NW sec. 31-12-19w. Drlg. 795 ft.

Parrish & Denman No. 1 Walter, SE SW SE sec. 14-13-17w. Rig.

Rose Spring Drlg. Co. et al No. 1 Union Pacific, NE cor. sec. 9-13-20w. Bldg. rig.

Twin Drlg. Co. No. 1 Copeland, NE NE SW sec. 26-14-19w. Rig.

Twin Drlg. Co. No. 1 Reidel, SW SW NE sec. 27-13-16w. Oswald 3,212 ft.; S.O. 3,240 ft.; S.D. 3,355 ft.

Wolf Creek Oil Co. et al No. 1 Polifka, SW SW NE sec 24-13-18w. Loc.

Yarnell & Carlson No. 1 Phillip, NW NW SE sec. 2-14-18w. Drlg. 1,115 ft.

Ellsworth County

Empire O. & R. Co. et al No. 1 Kroesch. NW NW SE sec. 33-17-9w. Set 8-in. csg. 3,014 ft. C.O.

Skiles et al No. 1 Kafka, NE NE SW sec 15-17-8w. K.C. L. 2,835 ft.; Siliceous 3,319-27 ft. T.D.; H.F.W.; D.&A.

Finney County

Helmerich & Payne No. 1 Jones, C SE sec. 34-26-34w. Rig.

Lone Star State Drlg. Co. No. 1 Hamlin, SW SW NE sec. 31-24-34w. S.D. 1,775 ft.

Graham County

Vickers Pet. Co. & Phillips Pet. Co. No. 1 Hutton, NE NE SE sec. 29-8-22w. Anhydrite 1,805 ft.; drlg. 1,819 ft.

Greenwood County

Hale & Reese No. 1 Nedens, NE SE NW sec. 12-25-10. S.D. 285 ft.

Ward McGinnis No. 1 Dater, NW NW SW sec. 11-24-8. Drlg. 1,200 ft.

Ward McGinnis No. 1 Lampe, NW NE SW sec. 26-24-8. R.U.

Harper County

Marathon Oil Co. No. 1 Zellers, C SW NW sec. 17-35-8w. Wilcox sand 5,320 ft.; S.O. and gas, salty taste; T.D. 5,410 ft.; fsg.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. S.D. 3,796 ft.

Haskell County

Helmerich & Payne et al No. 1 Larson, C SE sec. 28-28-33w. Rig.

Kuhn Brothers et al No. 1 Nilson, SW SW SE sec. 21-28-32w. R.U.R.

Kingman County

D. R. Lauck et al No. 1 Prather, C SE sec. 18-27-8w. Rotary rig.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 33-27-8w. O.W.D.D.; drlg. 4,553 ft.

Oklahoma Oil Corp. et al No. 1 Reeves, NW cor. sec. 29-27-5w. Location.

McPherson County

Empire Oil & Ref. Co. No. 1 Cunningham, SE cor. sec. 26-18-1w. Drlg. 1,735 ft.

T. C. Johnson, et al No. 1 A. R. Johnson, SW SW NW sec. 33-17-1w. Bldg. rig.

Ness County

Continental Oil Co. No. 1 Thompson, C E½ E½ SW sec. 13-18-26w. Drlg. 3,890 ft.

Reno County

Cheney et al No. 1 Moore, NE cor. sec. 14-26-8w. Drlg. 2,335 ft.

Dickey Oil Co. No. 1-A Shepherd, NE NE NW sec. 22-26-9w. Chat 3,870 ft.; wtr., 4,161 ft.; P.B. 4,156 ft.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. S.D. 2,815 ft.

Helmerich & Payne et al No. 1 Schwaiger, SW SE NE sec. 27-26-5w. Drlg. 3,900 ft.

McPherson Drlg. Co. et al No. 1 Miller, SE SE NE sec. 23-24-5w. Chat 3,365-73 ft.; Viola 3,779 ft.; Wilcox 3,829 ft. (cor.) Siliceous 3,917-75 ft. T.D.; D.&A.

Miller et al No. 1 Detter, NE SE NW sec. 28-22-7w. Spudded.

Rice County

Beardmore et al No. 1 Fuller, SW SW SE sec. 23-18-7w. Drlg. 995 ft.

Day No. 1 Mason, NW NW NE Sec. 28-21-7w. Chat 3,388-3,400 ft.; flowed 91 bbls. in 59 minutes; shut in 2 hrs., flowed 3 bbls. oil in 10 min.; acidized; no test.

Dickey Oil Co. and Continental Oil Co. No. 1 Newkirk, NE NE SW sec. 11-18-7w. Simpson 3,179 ft.; cored 3,181-94 ft.

Duwe & Schneider No. 1 Wright, NE cor. sec. 36-21-7w. K.C. 2,925 ft. H.F.W. 3,055 ft.; U.R.

Gilmac Oil Co. No. 1 Sargent, SE cor. sec. 31-18-6w. S.D. 865 ft.

Grattan et al No. 1 Williams, SW SW NW sec. 17-18-7w. K.C. L. 2,818 ft.; cg. 3,202 ft.; H.F.W. 3,207-12 ft. U.R.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Permian Oil Co. No. 1 Monroe, C NE NE sec. 9-20-7w. Set 10-in. csg. 2,114 ft.; S.D. 2,605 ft.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7w. Rig.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Drlg. 40 ft.

Simpson & Noble et al No. 1 Pulliam, C S½ N½ NE sec. 35-19-8w. Drlg. 3,115 ft.

Simpson & Noble and Stanolind O. & G. Co. No. 1 Bowman, SW SW NW sec. 22-19-10w. Loc.

Skiles et al No. 1 Stout, SE cor. sec. 6-21-9w. Spudded.

W. E. Witt No. 1 Hill, SE SE NW sec. 3-20-9w. K.C. 2,854 ft.; drlg. 3,105 ft.

Rooks County

Hartman & Blair et al No. 1 Hall, NW cor. sec. 25-10-17w. Rigging up.

L. C. D. Drlg. Co., et al No. 1 Westhusin, C NE SE sec. 11-9-17w. Bldg. rig.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. U.R. 10-in. csg. 780 ft.

Murfin et al No. 1 Westhusin, NE NE SE sec. 19-9-16w. U.R. 2,355 ft.

Skaer Oil Corp. et al No. 1 Dryden, NE cor. sec. 28-10-17w. Drlg. 785 ft.

Trees Oil Co. No. 1 Minx, SW cor. sec. 31-10-18w. Location.

Rush County

Boyle & Grossman No. 1 Wilson, NE cor. sec. 33-17-19w. Drlg. 705 ft.

Ira Keith et al No. 1 Dartmouth Savings Bank, SW SW NE sec. 3-17-18w. Oswald 3,335 ft.; R.U.S.T. 3,346 ft.

National Refining Co. No. 1 Werth, NW NE NE sec. 7-16-18w. Anahydrite 1,195 ft.; U.R. 2,560 ft.

Pryor & Lockhart et al No. 1 Stegman SW NW NE sec. 11-16-17w. Drlg. 2,995 ft.

Rose Spring Drlg. Co. et al No. 1 Jacobs, SW SE NW sec. 3-16-17w. Set 7-in. csg. 3,310 ft.; T.D. 3,341 ft.

Russell County

R. G. Berry et al No. 1 Cook, NE NE SE sec. 19-11-13w. C.O. 2,610 ft.

Bridgeport Machine Co. et al No. 1 Wyckoff, SE NW NE sec. 27-11-13w. Oswald 2,955 ft.; fsg. 3,460 ft.

Central Pet. Co. No. 1 Furthmeyer, NE cor. sec. 28-14-15w. Anhydrite 838 ft.; C.O. 2,550 ft.

Darby Petroleum Corp. and Continental Oil Co. No. 1 Letsch, SE NE NW sec. 34-14-13w. H.F.W. 3,132-34 ft. T.D.

Eisenhour & Shaffer No. 1 Humes, SW SW SW sec. 6-14-12w. S.D. 2,735 ft.

Hartman & Blair No. 1 Johnston, NW cor. sec. 11-13-14w. Rig.

Hartman & Blair No. 1 McAllister, SW SW SE sec. 24-13-15w. R.U.

Lario Oil & Gas Co. et al No. 1 Steinert, NE NE SW sec. 21-15-15w. Location.

Stearns & Streeter et al No. 1 John Hancock Ins. Co., SE SW SW sec. 31-13-14w. Drlg. 2,320 ft.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w.
Tarkio lime 2,515 ft.; T.D. 2,550 ft.; swbd. 5 bbls. oil per hr., and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

P. G. Reynolds No. 1 Fredrickson, SE SW SE sec. 6-13-12w. S.D. 2,620 ft.

Wakefield et al No. 1 Krug, NE NW SW sec. 7-15-14w. R.U.

Sedgwick County

Joe Aylward et al No. 1 Harrison, SE SE SW sec. 23-25-2. Bldg. rig.

Dickey Oil Co. No. 1 Ayers, SW SW NW sec. 12-27-2. Drlg. 2,385 ft.

D. R. Lauck No. 1 Parke, SE SE NE sec. 17-25-2. Rigging up.

Stafford County

Stanolind O. & G. Co. and Atlantic Oil Prod. Co. No. 1 Shotton, SW cor. sec. 27-22-13w. Anhydrite 735 ft.; K.C. 3,430 ft.; coring 3,484 ft.

Sumner County

Craft & Wilson No. 1 Nevitt, NE NW NE sec. 36-32-2e. Stalmaker 2,223-42 ft.; U.R. 2,213 ft.

Helmerich & Payne et al No. 1 Elwell, NW NW NE sec. 18-34-1. Chat 3,867 ft.; S.D. 4,000 ft.

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. S.G. 2,187 ft.; U.R. 2,191 ft.

Pryor & Lockhart et al No. 1 Knowles, SW cor. sec. 30-30-1. K.C. 2,858 ft. Drlg. 2,885 ft.

E. B. Shawver No. 1 Judd, SW SE NE sec. 3-34-2. M.I.M.

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. Rig.

Wilcox O. & G. Co. et al No. 1 Hess, SE SE NW sec. 13-34-2w. Drlg. 3,396 ft.

D. J. Wilson et al's No. 1 Clark, 1,320 ft. from W and 35 ft. from S line of NW sec. 15-35-1w. Drlg. 4,045 ft.

Trego County

Central Commercial's No. 1 Wagg, NW NW SE sec. 17-13-21w. K.C. lime 3,548 ft.; bailed 30 bbls. oil per day; acidized; bailed 12 bbls. oil per day; T.D. 3,950 ft.; 780 ft. oil in hole in 3 days.

Continental Oil Co. No. 1 Holcomb, E½ E½ NW sec. 26-11-23w. Oswald lime, 3,602 ft.; cor.; T.D. 3,654 ft.; acidized; made potential 616 bbls. Comp.

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-12-24w. M.I.M.

R. B. McNeely et al No. 1 Lemke, NW NW SW sec. 7-11-23w. Rotary rig.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE

sec. 27-28-12. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.
Foster et al No. 1 Timm, SE NW NE sec. 36-25-12. Drig. 425 ft.
Roy Johnson No. 1 Hare, C N½ NW NE sec. 32-25-14. Drig. 500 ft.
Mendenhall et al No. 1 Hunter, NE cor. sec. 36-25-14. Drig. 660 ft.
C. L. Sheedy No. 1 Baker, SE SE NW sec. 2-26-14. T.D. 1,560 ft. P.B. 1,416 ft.

OKLAHOMA

Week Ending May 2

NORTHERN OKLAHOMA

Beckham County

Wood Pet. & Royalty Corp. No. 1 Blair, C NW SE sec. 32-9-26w. Granite wash 2,-943-71 ft.; granite 2,984 ft.; T.D. 2,989 ft.; S.D.

Caddo County

Denver Prod. & Ref. Co. No. 1 Sah-Can C SE SE sec. 33-10-10w. Drig. in new hole below 8,000 ft.

Cleveland County

Hall-Briscoe, Inc. No. 1 Fant, S./ SW NE sec. 27-10-2w. S.D. at 7,511 ft.
Ann Lee Mayes, Inc., No. 1 Parsons, SW SW SE sec. 30-9-1. T.D. 3,510 ft.; tools moved out, may make new contract.

Coal County

Shell Pet. Corp. No. 3 Hill, SE SE NW sec. 30-3-10. Hunton 5,280 ft.; Sylvan 5,355 ft.; Viola 5,448 ft.; S.O. 5,640-57 ft.; Bromide 5,560 ft.; McLish 5,720 ft.; cored 5,946-6,046 ft. in Dolomite; S.S. O.&G.

Comanche County

N. E. Milling No. 1 Miller, NE NE SW sec. 23-4-12w. T.D. 995 ft.; machine moved out.

Garfield County

Herndon Drig. Co. et al No. 1 Branson, SW SW SE sec. 23-24-3w. Drig. 4,780 ft.
W. J. Sherry et al No. 1 Haken, NW NW SW sec. 32-20-10w. Miss. lime 5,960 ft.; whipstock 5,939 ft.; reset whipstock.
Stanolind O. & G. Co. et al No. 1 Brunson, SW SW NE sec. 32-23-4w. Top Dense 5,915 ft.; Dolomite 5,935 ft.; T.D. 5,962 ft.; 2,100 ft. salt water in hole; slight show gas; swabbing.

Garvin County

Charles E. Carter et al No. 1 Wood, NW SW SE sec. 5-4-3. O.W.D.D.; drlg. 1,-994 ft.
McElreath & Suggett No. 1 Lasater, SE SE SW sec. 2-2-1w. Location.

Hughes County

Blackwell Oil & Gas Co., No. 1 Long, SE NE NW sec. 29-9-9. Location.
M. H. Halsey No. 1-A Eustep, NW NW SW sec. 11-8-9.
Wapanucka 2,428 ft.; Cromwell 3,453 ft.; T.D. 3,454 ft.; 3 bailers wtr. an hr.; P.B. and shot, 3,030-45 ft.; est. 10,000,000 ft. of gas; P.B. to 3,413 ft.; re-shot.
George Orr et al No. 1 Morgan, NE SE SW sec. 6-7-9. Cellar and pits.
Phillips Pet. Co. No. 1 Eberle, NE NE SW sec. 12-5-9. Wapanucka 3,337 ft.; Cromwell 4,368 ft.; drlg. 4,549 ft.
Sinclair Prairie Oil Co. et al No. 1 Wilkly, SW cor. sec. 23-9-8. R.U.R.
Sivalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. Booch 2,950 ft.; Gilcrease 3,100 ft.; U.R.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 18-27-4. Drlg. 70 ft.

Kiowa County

W. C. Adams et al No. 2-A Stone, C SE SE NE sec. 34-7-17w.
T.D. 1,193 ft.; machine moved out.

Lincoln County

Amerada Petroleum Corp. et al No. 1 Zimmerman, SW SW NE sec. 10-12-5. Rig.

McClain County

Arab Pet. Corp. No. 1 Autry, NW cor. sec. 16-7-3w. T.D. 5,294 ft.; cmtd. to 5,040 ft.; set whipstock 7,500 ft. Drig. on bottom.

McCurtain County

Louis Sikes No. 1 Mitchell, C NW SW sec. 12-9s-26. Spudded and S.D. for 30 days.

McIntosh County

Indian Ty. Ill. Oil Co.'s No. 1 Tascred, 1,650 ft. S and 330 ft. E of C. Sec. 9-9-14. Wilcox 4,525 ft.; T.D. 4,536 ft.; 300 ft. wtr. in hole. P.B. to Gilcrease, topped at 2,695 ft.
Oklahoma Oil Corp. No. 1-A Wolf, SE SW SE sec. 35-12-17. Gas sand 840 ft.; dry sands 1,200 ft. and 1,400 ft.; set 6-in. csg. at 2,367 ft.; H.F.W. 2,555-70 ft.

Noble County

Continental Oil Co. No. 1 Pruitt, NW SE SW sec. 19-20-1w Oswego 4,365 ft.; Viola 4,972 ft.; T.D. 4,992 ft.; bailing.

Okfuskee County

Amerada Pet. Corp. and Stanolind O. & G. Co. No. 1 Wells, SW SW NW sec. 7-11-7. Drlg. 1,260 ft.
Champlin Ref. Co. No. 1 Thompson, SW SW NW sec. 7-13-8. Drlg. 950 ft.
Manahan & Grisso No. 1 Dalton, SE SE SE sec. 36-16-8.
Senora sand 1,733 ft.; T.D. 1,763 ft.; flowed 75 bbls. oil first hour after shot; in 9 hrs.; lost 4 hrs. while cleaning out.

Oklahoma County

H. R. Hollenback et al No. 1 Cooper, NW NW NE sec. 15-11-1. Oswego, 5,435 ft. Drlg. 5,760 ft.

Osage County

Champlin Ref. Co. No. 1 Osage, SW SW NE sec. 35-25-6. Drlg. 1,310 ft.
Elfred Beck No. 1 Osage, SE SE NE sec. 16-23-7. 1,780 ft. set 8-in. csg.
Gray & Folson No. 1 Osage, SW SW NE sec. 33-25-7. R.U.S.T.
Midco Oil Corp. et al No. 1 Osage, NW NW SE sec. 11-23-6. T.D. 1,085 ft. Set 10-in. csg.
Stoner Bros. No. 1 Osage, NW NE SW sec. 18-22-8. Loc.

Payne County

Denver Producing & Ref. Co. et al No. 1 Pratt, NW cor. sec. 20-18-3. Rig.

Pontotoc County

Sandback et al No. 1 Sands, NE NE NE sec. 20-2-5. T.D. 475 ft.; S.D. for new machine.

Pottawatomie County

Ross Oil Co. et al No. 1 Sparkman, SE NE sec. 33-8n-4e.
C.O. 3,915 ft.; shot at 3,871-90 ft.; swbd. 250 bbls. in 24 hrs.; acidized.
J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,520 ft.

Seminole County

Amerada Pet. Corp. et al No. 1 Community, NE NE SW sec. 3-10-5. Hunton. 4,421 ft.; T.D. 4,438 ft.; flowed 768 bbls. in 18 hrs. Comp.
Ark Royalty Co. No. 1 Kiker, SE SE NE sec. 9-10-7. Spudded and S.D.
Imperial Drig. Co. No. 1 Aldridge, SW NE NW sec. 33-9-8. Calvin, 1,569 ft.; T.D. 1,907 ft.; gas 4,800,000; showing wtr.; P.B. 1,900 ft.; testing.
Sinclair Prairie Oil Co. et al No. 1 Harrison, NE NE NW sec. 17-8-8. Cromwell 3,222-3,360 ft.; Hunton 3,928 ft.; Wilcox 4,274 ft.; coring 4,290 ft.
Feimlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

Washita County

L. P. McWhirter's No. 1 fee SW cor. Sec. 34-8n-19w. T.D. 1,465 ft.; S.D.

SOUTHERN OKLAHOMA

Atoka County

Riverland Oil Co. No. 1 Jones, SW SW NE sec. 4-3s-9e. Drlg. 1,913 ft.

Bryan County

Trio Oil Co. No. 3 Gilbert, C SW sec. 25-8s-7e. T.D. 1,200 ft. S.D.O.

Carter County

Carter Oil Co. No. 1 Carter-Williams, SW NE SW sec. 27-2s-3w. T.D. 3,105 ft.; flowed 3,309 bbls. first 24 hrs.; shut in.
Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. Coring 4,400 ft.
W. E. Hammond No. 1 J. Rile, SW SE SE sec. 8-5s-1e. Drlg. 115 ft.
Texas Co. No. 1 Cathey, SE NE NE sec. 6-5s-1w. T.D. 4,191 ft.; pumping 20 bbls. daily, may deepen.

Cotton County

English Drig. Co. No. 1 Wilson, NW NW SE sec. 7-4s-11w. Drlg. 175 ft.

Harmon County

Lionlko Trust, Ltd. No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. Drlg. 2,262 ft.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. Granite Wash 1,350 ft.; gas 500,000 ft.; drlg. 1,610 ft.
John Dickson et al No. 1 W. B. Wright, NE NW SE sec. 19-1-19w. Loc.
A. H. Jackman No. 1 fee, SW SW SW sec. 27-1s-24w. T.D. 2,528 ft.; fsg.
Pioneer Oil Co. No. 1 N. Rawls, SW NW NE sec. 26-1-20w. Machine.
Universal Oil Co. No. 1 R. W. Briscoe, NW SW NE sec. 34-1s-20w. Drlg. 2,631 ft.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 6-8s-7w. Sd. 1,525-57 ft.; T.D. 2,-560 ft.; S.O.; running core bbl.
Geo. Pace No. 1 Gardner, SW cor. Sec. 23-5s-5w. T.D. 2,522 ft.; S.D.O.
Reno Oil Co. No. 1 Gann, SE SW NE sec. 35-6s-4w. T.D. 3,176 ft.; sandy shale; dry and abd.

Johnston County

Equitable O. & G. Co. No. 1 Bellsey, NE SW sec. 12-2s-4e.
Arbuckle lime 1,552 ft.; drlg. 1,936 ft. in lime.
Magnolia Pet. Co. No. 1 Green, NE cor. flowed 225 bbls. in 7 hrs., and 203 bbls. sec. 12-2s-7. Hunton 1,138 ft.; Sylvan 1,395 ft.; Viola 1,547 ft.; drlg. 1,755 ft.
Moore & Wirick No. 1 Westheimer & Daube, SE NW NE sec. 19-3s-4e. Drlg. 3,500 ft.

Love County

Amerada Pet. Corp.'s No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft. in L.; small showing free oil and gas; building to 6,200 ft.
J. B. Russell et al No. 1 Scott, SW SE SW sec. 29-3s-2e. T.D. 4,968 ft.; S.D. for orders.
Sinclair Prairie Oil Co.'s No. 1 Stockt SE SE SW sec. 26-6s-2w. T.D. 6,914 ft.; sd. 6,890-6,909 ft.; flowed and swbd. 534 bbls. oil in 5 days; drlg. 7,923 ft. in shale.

Marshall County

Helmerich & Payne No. 1 Taliaferro, NW SE SW sec. 26-5s-5e. Loc.

Pushmataha County

C. W. Whitehead et al No. 1 Misser, SE SW SW sec. 35-3s-18e. T.A.; T.D. 3,540 ft.

Stephens County

W. G. Endicott et al No. 1 McFatridge, NW NW SW sec. 11-3s-9w. Drlg. 1,300 ft.
T. H. McCasland No. 1 J. C. Parker, NE NE SW sec. 2-1n-6w. M.I.M.

Tillman County

Gulf Oil Corp. No. 1 Wearmouth, SE NW SE sec. 31-1s-18w. ran Schlumberger; S.D.O.
Johnson, Young & Mitchell No. 1 Donahoe, SE NW NW sec. 7-4s-17w.
D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-15w. Drlg. 1,125 ft.

ARKANSAS

Arkansas County

Ark. O. & G. Co. No. 3 Fischer, 250 ft. S, 200 ft. E, NW cor. NE NW sec. 6-4w. Rig; S.D. W.O.

Calhoun County

Ben G. Barnett No. 1 Freeman Smith, SE cor. sec. 36-15-14. Set 10-in. 1,600 ft.

Clark County

Serie Tripanoff, tr., No. 1 W. Gibbons, sec. 27-8-18. Arranging to test 557 ft.

Dallas County

Kel-Mac Lease & Royalty Co. No. 2 R. Owens, NW cor. NW SW sec. 26-10-16. S.D. 1,924 ft.

Hempstead County

Dixie Drig. Co. No. 1 Wheatley, 330 ft. S, 30 ft. E, NW cor. SW NE sec. 14-11-26. R.U. and W.O.O.
Fitzwater et al No. 2 Lafferty, C NW sec. 17-14-24. Tested S.W. and W.O. 2,180 ft.
Murdock-May & Easton No. 1 Conway est., 330 ft. N and E, SW cor. NW SW sec. 17-14-24. Set 12¼-in. 80 ft.; S.D. 120 ft.

LaFayette County

Earl F. Fox No. 2 Coleman Bros., NE NE sec. 30-16-24. S.D. 2,760 ft.
Erwin & Leach No. 3 Bodcaw Lbr. Co., 330 ft. S and E, NW cor. sec. 20-16-13. Drlg. 6,824 ft.
Joe Modisett No. 1 Red River Lbr. Co., C SW SW sec. 21-19-14. Drlg. plug. 5,-310 ft.
Transportation Pet. Co. No. 1 Cockran, 330 ft. S and W, NE cor. SE sec. 26-19-25. Tested S.W.; arrange to abd.

Miller County

Odell Hinson No. 1 Montana Realty Co., NE cor. NW NW sec. 3-17-28. Set 12¼-in. csg. 238 ft.
J. W. Jones et al No. 1 J. H. Bush, sec. 2-19-27. Loc.
King Oil Corp. No. 1 G. W. Crank, SW NE sec. 19-16-25. S.D.; W.O. 3,906 ft.; C. V. Lens No. 3 Dale, sec. 24-15-26. Cg. 5,826 ft.
M. L. Luckett No. 1 Beck, sec. 34-15-24. Drlg. 2,005 ft.
L. H. Mahon et al No. 1 Miller Land & Timber Co., SW cor. SE sec. 29-18-27. S.D. 1,845 ft.
McAlester Fuel Co. No. 1 J. N. Cook, sec. 18-20-27. Loc.

Ouachita County

Carnes & Harrell No. 1 Dunn & Robinson, new loc., 440 ft. S, 440 ft. E, NW cor. NW SE sec. 7-12-19. Rig.
Delta Drig. Co. No. 1 Colin Lbr. Co., new loc. SE¼ SE¼ sec. 23-15-15. Loc.
L. L. McDonald No. 1 Langley, 330 ft. N and E, SW cor. NE SW sec. 19-15-15. Cg. 2,040 ft.
Phillips Pet. Co. No. 1 J. D. Reynolds, 330 ft. N and W, SE cor. SE NW sec. 27-15-15. Arranging deepen; 4,909-15 ft. gas and distillate; drlg. deeper.
J. D. Reynolds No. 1 McKennie, 204 ft. S, 300 ft. W, NE cor. SE SW sec. 36-15-16. Fsg. for cable tools 1,970 ft.

Union County

Arkansas Southern Oil Co. No. 1 F. R. Laney, sec. 30-19-16. S.D. 175 ft.
Beuharal Oil Corp. No. 1 R. Pumphrey, SE cor. NE sec. 11-17-14. Drlg. 3,205 ft.
J. C. Bucbee No. 1 Exzell, SW cor. NE NW sec. 13-17-15. Junked and abd. 3,-572 ft.; skidding over.
McCrossien Oil Co. No. 2 D. Norman, NE cor. NE SE sec. 2-18-13. W.O. jack to pump, 3,556 ft.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo—Rodessa

Ark.-La. Gas Co. No. 12 Rodessa Oil & Land Co., NW SE sec. 22-23-16. Drlg. 5,932 ft.
Ark.-La. Gas Co. No. 14 Rodessa O. & Land Co., SW cor. NW sec. 23-23-16. Drlg. 5,843 ft.
Ark.-La. Gas Co. No. 15 Rodessa Oil & Land Co., NE cor. SW NW sec. 23-23-16. Drlg. 4,413 ft.
Ark.-La. Gas Co. No. 16 Rodessa Oil & Land Co., SE cor. NE sec. 22-23-16. Set 10-in. 3,316 ft.
Ark-La Gas Co. No. 9-A Rodessa Oil & Land Co., SE NE sec. 22-23-16. W.O.C. 6,018 ft.
Bartex P. L. Co. No. 1 Adams, NW cor. sec. 17-23-15. Set 16-in. 252 ft.; drlg. 4,635 ft.
Bartex No. 2 Adams, NW cor. NW NW sec. 17-23-15. Drlg. 1,930 ft.
Bartex Pipe Line Co. No. 3 Norton Est., SE NE sec. 18-23-15. T.D. 6,038 ft.; comp. 22 B.P.H.; 11/32-in. tbg. choke.
Bartex Pipe Line Co. No. 4 Norton Est., SW cor. SW NW sec. 17-23-15. Cg. 6,-026 ft.
Bartex Pipe Line Co. No. 1 Robinson, C E½ NE SE sec. 18-23-15. Mig. 6,025 ft.
Bartex Pipe Line Co. No. 2 Robinson, center W½ NW SW sec. 17-23-15. Tstg. 6,-057 ft.
Bartex Pipe Line Co. No. 2 Rodessa Oil & Land Co., NE SE sec. 13-23-15. Testing 5,966 ft.
Blackwell O. & G. Co. No. 1 Nugent, SW cor. NE SE sec. 8-23-15. P.B. and redrig. 3,167 ft.
S. P. Borden No. 1 K.C.S., NW cor. SW sec. 23-23-16. Drlg. 5,790 ft.
Danciger O. & R. Co. No. 1 Francis heirs, C Lot 2, Blk. 10, sec 25-23-16. Drlg. 5,660 ft.
Danciger O. & R. Co. No. 1 J. F. Neugent, C Lot 3, Blk. 12, sec. 25-23-16. Cog. 6,002 ft.; T.D.
Duncan & Woods No. 1 Andrews, Lot 5, Blk. 31, sec. 23-23-16. Drlg. 5,495 ft.
Haynes No. 4 Caldwell, NW cor. SW SE sec. 12-23-16. Drlg.
Haynes Prod. Co. No. 12 Lawton, NE cor. SW SW sec. 14-23-16. T.D. 6,012 ft.; comp. 105 B.P.H.; 1⅝-in. tbg. choke.
Haynes Prod. Co. No. 13 Lawton, NW cor. SE SW sec. 14-23-16. T.D. 6,010 ft.; W.O.C.; 7-in. at 6,009 ft.
Haynes Prod. Co. No. 14 Lawton, SW cor. NW SW sec. 14-23-16. Set 12½-in. 262 ft.; drlg. 3,624 ft.
Haynes No. 15 Lawton, SW cor. SW NW sec. 14-23-16. Drlg. 2,100 ft.
Haynes No. 16 Lawton NE cor. SW NW sec. 14-23-16. Drlg. 1,920 ft.
Haynes Prod. Co. No. 5 Otwell, NE cor. SE SE sec. 14-23-16. Set 7-in. 5,988 ft.; comp. 130 B.P.H.; 1⅝-in. tbg. choke; T.D. 6,006 ft.
Haynes No. 6 Otwell, NE cor. SE SE sec. 15-23-16. Run csg. 2,100 ft.
Haynes Prod. Co. No. 3-A Mattie Pitts, SE cor. SE SW sec. 11-23-16. Cg. 5,855 ft.
Haynes Prod. Co. No. 2 Zylka, NE cor. SW sec. 10-23-16. Drlg. 5,790 ft.
J. Edward Jones No. 1 Ashley, Lot 6, Blk. 13, sec. 22-23-16. Cg. 5,984 ft.
J. Edward Jones No. 1 Gibson, SW cor. SE SW sec. 22-23-16. Set 16-in. 250 ft.; drlg. 4,232 ft.
R. W. Norton No. 2 Atkins Unit, NE cor. sec. 18-23-15. Set 13⅜-in. 200 ft.; drlg. 5,754 ft.
R. W. Norton No. 2 Fosque Unit, SW cor. sec. 20-23-16. Drlg. 4,852 ft.
W. F. Lacey No. 1 Tyson, NE cor. SE NW sec. 24-23-16. Cg. 5,976 ft.
M. H. Marr No. 5 Hunter, NW cor. SW sec. 15-23-16. Drlg. 5,805 ft.
M. H. Marr et al No. 2 Peak, SW cor. SE sec. 11-23-16. Drlg. 3,000 ft.
R. W. Norton No. 4-A Caddo Levee Board, NW NE sec. 21-23-16. Drlg. 5,876 ft.
R. W. Norton No. 1 Slattery, NW cor. sec. 23-23-16. Set 7-in. 5,991 ft.; comp. 21 B.P.H.; ¾-in. tbg. choke; T.D. 5,992 ft.
R. W. Norton No. 2 Spearman, 660 ft. E and 330 ft. S, NW cor. SW sec. 13-23-15. Abd.; drlg.
R. W. Norton No. 4 Tyson heirs, 2,942 ft. N and 3,313 ft. E, SW cor. sec. 13-23-16. Drlg. 2,695 ft.
O'Brien Bros. No. 3 Rodessa Oil & Land Co., SW cor. NW SW sec. 14-23-16. Set 16-in. 230 ft.; drlg. 4,525 ft.
Travis et al No. 1 Raney, 990 ft. W of C sec. 17-23-15. Tstg. 6,092 ft.; base Young zone 6,087 ft.
Tri-State O. & G. Co. No. 1 F. L. Westbrook, C Lot 6, Blk. 12, sec. 23-23-16. Drlg. 2,918 ft.
Tri-State-Williams & Peterbaugh No. 1

Ellis, Lot 2, Blk. 20, Townsite, sec. 23-23-16. Set 7-in. 5,955 ft.; T.D. 6,018 ft.; cmtd. lnr. at T.D.

United Gas Pub. Ser. Co. No. 7 Ardis & Co., SW cor. SE SW sec. 14-23-16. Cmtd. csg. 6,019 ft.; T.D. 6,041 ft.; W.O.C.

United No. 3 Brewer Unit, 655 ft. N and 656 ft. E. SW cor. sec. 21-23-16. Drlg.

United No. 2 Harris, 326 ft. W, 330 ft. N. SE cor. SE SE sec. 15-23-16. Drlg. 1,796 ft.

United Gas Pub. Ser. Co. No. 1 Maroun Unit, 330 ft. S and E. NW cor. sec. 24-23-16. Cg. 6,020 ft.

United Gas Pub. Ser. Co. No. 1 McCoy, NE cor. sec. 16-23-16. Drlg. 635 ft.

United Gas Pub. Ser. Co. No. 3 Miller, SW cor. NW NW sec. 14-23-16. Set 13⅜-in. 315 ft.; drlg. 5,022 ft.

United Gas Pub. Ser. Co. No. 4 M. L. Pitts Unit, SW cor. sec. 13-23-16. Set 7-in. 6,011 ft.; T.D. 6,047 ft.; comp. 28 B.P.H. on ¾-in. tbg. choke.

United No. 5 M. L. Pitts, 312 ft. N and 658 ft. W, SE cor. NW SE sec. 13-23-16. Drlg.

United No. 6 M. L. Pitts, 280 ft. S and 658 ft. W, NE cor. SW SE sec. 13-23-16. Drlg. 1,000 ft.

United Gas Pub. Ser. Co. No. 2 N. S Spearman Unit, SW NW sec. 18-23-15. Cmtd. 7-in. 6,013 ft.; T.D. 6,030 ft.; W.O.C.

United Gas Pub. Ser. Co. No. 3 Thomas Unit, Lots 4 and 5, Blk. 5, Townsite, sec. 23-23-16. Set 13⅜-in. 314 ft.; drlg. 5,596 ft.

United Gas Pub. Ser. Co. No. 4 Thomas Unit, NW cor. NE NW sec. 23-23-16. Drlg. 5,613 ft.

United Gas Pub. Ser. Co. No. 5 Thomas Unit, NW cor. SE NW sec. 23-23-16. P.B. to 3,466 ft. to st. hole.

United Gas Pub. Ser. Co. No. 1 U. S. Govt., sec. 29-23-16. Set 13⅜-in. 350 ft.; cmtd. 7-in. 6,020 ft.; T.D. 6,045 ft.

United Gas Pub. Ser. Co. No. 13 Rodessa Oil & Land Co., SW NE sec. 23-23-16. W.O.C.; T.D. 6,011 ft.

United Gas Pub. Ser. Co. No. 14 Rodessa Oil & Land Co., NE cor. sec. 23-23-16. W.O.C.; T.D. 6,014 ft.

United Gas Pub. Ser. Co. No. 16 Rodessa Oil & Land Co., NE cor. NW NW sec. 22-23-16. Set 7-in. 5,994 ft.; T.D. 6,016 ft.; comp. 55 B.P.H.; ½-in. tbg. choke.

United Gas Pub. Ser. Co. No. 17 Rodessa Oil & Land Co., NW cor. sec. 22-23-16. Set 13⅜-in. 313 ft.; drlg. 4,487 ft.

United Gas Pub. Ser. Co. No. 18 Rodessa Oil & Land Co., SW cor. NE SE sec. 15-23-16. Drlg. 4,618 ft.

United Gas Pub. Ser. Co. No. 19 Rodessa Oil & Land Co., SE cor. NE SE sec. 15-23-16. Set 13⅜-in. 315 ft.; drlg. 3,642 ft.

United Gas Pub. Ser. Co. No. 20 Rodessa Oil & Land Co., SE cor. SE NE. Set 16-in. 313 ft.; drlg. 4,671 ft.

United Gas Pub. Ser. Co. No. 21 Rodessa Oil & Land Co., NE cor. SE NE sec. 15-23-16. Drlg. 5,032 ft.

United Gas Pub. Ser. Co. No. 22 Rodessa Oil & Land Co., NW cor. sec. 15-23-16. Drlg. 1,220 ft.

Sabine Parish—Zwolle

Ellis Prod. Co. No. 1 Williams, 330 ft. S and W, NE cor. SE NE sec. 33-7-11. Tested dry; S.D.; W.O. 2,806 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSoto O. & G. Co. No. 1 C. R. Mower 370 ft. S, 400 ft. W, NE cor. NW SW sec. 9-16-10. D.&A. 3,055 ft.

Bossier Parish

Geo. H. Bringhurst et al No. 1 Buckley NE SW sec. 36-21-12. Tested S.W. 2,300 ft.; W.O.O. 3,309 ft.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Set 10-in. 66 ft.; drlg. 972 ft.

United Gas Pub. Ser. Co. No. 1-A A. J. Murff, NW cor. sec. 17-17-11. Cg. 5,336 ft.

Caddo Parish

Calatex O. & G. Co. No. 1 Hudson, NW SW sec. 8-16-16. O.W.D.D. from 2,970 ft.

Falcon Oil Co. No. 15 Deckson, NW SE sec. 27-20-15. P.B. 2,342 ft.; old T.D. 2,349 ft.

Juan et al No. 1 Hobbs, NE NE sec. 29-21-15. W.O.S.R. 1,669 ft.

Bill Morefield et al No. 1 Stokely, 745 ft. S and 100 ft. E. C sec. 5-20-16. R.U.

Morris & Wooley No. 1 Pender, NW cor. SW sec. 11-20-15. Set 10-in. 60 ft.; drlg. sh. 1,600 ft.

Persian Oil Co. No. 1 J. E. Cupples, 500 ft. S and 350 ft. W, NE cor. sec. 24-16-13. Drlg.

Press & Lambert No. 1 fee, SW cor. NE SE sec. 10-20-15. R.U.

Pyramid O. & G. Co. No. 1-A S. B. Wheeler, 1,320 ft. S, 1,500 ft. W, NE cor. sec. 16-18-16. Cg. 4,662 ft.

Sport Oil Corp. No. 1-D Muslow, SE cor. sec. 5-20-15. Set 9⅝-in.; drlg. 2,675 ft.

Caldwell Parish

Critchett & Woods No. 1 Kyles, NE cor. SW NE sec. 18-11-3e. P.B. to 1,300 ft.; old T.D. 1,740 ft.

Critchett & Woods No. 2 La. Cen. Lbr. Co., NW cor. NW SE sec. 18-11-3e. S.D.; rig repair, 1,602 ft.

Claiborne Parish

Triangle Drlg. Co. No. 1 Kilpatrick, 664 ft. N and E, C sec. 7-19-5. D.S.T.

United Gas Public Service Co. No. 1 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. Cg. 6,612 ft.

Concordia Parish

Zeni Oil Co. No. 1 Young, 1,200 ft. W, 100 ft. N, SE cor. sec. 25-6n-8e. S.D. 1,120 ft.

De Soto Parish

S. S. Alexander No. 1 G. R. Stell 330 ft. S and W, NE cor. sec. 5-12-16. S.D. 6,002 ft.

E. B. Band et al No. 1 A. D. Johns, sec. 20-14-16. Abd.; S.W.; T.D. 2,652 ft.

J. G. Carson No. 1 C. J. McMichael, sec. 26-13-15. Drlg.

A. G. Halbach et al No. 1 Staton, 150 ft. N and E, SW cor. SE sec. 29-13-14. Drlg. 3,300 ft.

Larkin & Waar No. 1 Jackson, sec. 1-11-14. Cg. 5,504 ft.

R. C. Payne No. 1 Harris, NE cor. SW SE sec. 11-13-14. S.D. 1,300 ft.

Union Pet. Co. No. 1 Hill, sec. 3-10-13. S.D. 1,400 ft.

Franklin Parish

S. C. Jensen No. 1 Bailey, 660 ft. N and W of C sec. 12-11-6e. S.D. 800 ft.

Grant Parish

Acadian Prod. Corp. No. 7 Swope, NE cor. SE SE sec. 13-9-1e. Drlg. 1,590 ft.

Alexander et al No. 1 Maxwell, sec. 9-9-1e. W.O.S.R. 1,528 ft.

Taw Oil Co. No. 2 Bradford, sec. 16-9-1e. Drlg. 1,544 ft.

Taw Oil Co. No. 1 Bradford, NE cor. NW sec. 16-9-1e. Set 10-in. 840 ft.

La Salle Parish

Montague Oil Co. No. 7-A Zenonia Lbr. Co., NE cor. sec. 10-9-1e. Tested S.W. and W.O. 1,520 ft.

Lincoln Parish

Ark.-La. Gas Co. No. 1 C. E. Causey, NW cor. NE NW sec. 32-19-2w. D.&A. 4,687 ft.

Caldwell Land & Timber Co. No. 1 J. K. Hammons, 330 ft. S and E, NW cor. SE SW sec. 30-18-1w. S.D. 640 ft.

Herman L. Brown et al No. 1 S. Gardner, 330 ft. N, 330 ft. E, SW cor. NW NE sec. 10-17-4w. Cg. 5,515 ft.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. Drlg.

United Gas Pub. Ser. Co. No. 35 Crossett, sec. 22-21-4e. Comp. 5,000,000 ft. gas, 2,161 ft.

Red River Parish

I. J. Allen No. 1 Franklin Realty Co., sec. 20-11-9. Set 12½-in. 110 ft.; drlg. 650 ft.

Byrd Explo. Co., NE¼ SE¼ sec. 29-13-11. Drlg. 1,600 ft.

Richland Parish

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 636 ft. E, SW cor. sec. 15-18-7e. S.D. 1,305 ft.

Arthur Wray No. 1 Slocum, 2,436 ft. S 560 ft. W, NE cor. sec. 10-17-6e. S.D. 1,676 ft.

Sabine Parish

I. J. Allen No. 1 Paul, sec. 24-9-14. R.U.

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. Set 8-in. 75 ft.

Posey Sisters Oil Co. No. 3 A. J. Burkett, SW cor. SE NE sec. 10-9-13. Set 10-in. 40 ft.; drlg. 500 ft.

Claude H. Smith No. 1 Whitney Corp., 330 ft. S, 990 ft. W, NE cor. sec. 19-10-13. Set 7-in. 1,514 ft.; T.D. 1,650 ft.

A. H. Tarver No. 2 Baker, NW cor. NE sec. 36-8-12. D.S. stuck 5,300 ft.

Lee Whitehurst No. 2 Latham, sec. 19-9-13. Set 7-in. 1,593 ft.; drlg. 2,056 ft.

Whitehurst & Myers No. 1 Paul, SE cor. SW sec. 24-9-14. Swbg. 1,940 ft.

Tensas Parish

H. M. Jones et al No. 1 Chicago Mill & Lbr. Co., NE cor. sec. 30-12-10e. S.D. 685 ft.

Union Parish

Boucher & Pace No. 1 Frost-Johnson, NE NE sec. 27-21-1e. Installing heavy rig 3,279 ft.

Carbons Consd. No. 1 Bird, SW cor. SE sec. 27-22-3e. Set 10-in. 202 ft.

J. E. Farrell No. 14 State, 1,219 ft. S, 3,168 ft. E, NW cor. sec. 33-21-4e. Comp. 7,000,000 ft. gas, 2,136 ft.

Southern Carbon Co. No. 68 fee, sec. 8-21-4e. Set 6-in. 2,098 ft.

United Gas Pub. Ser. Co. No. 3 Stovall, NE NW sec. 33-21-4e. Drlg. 100 ft.

Vernon Parish

Llano Del Rio Co. No. 2 Gulf Lbr. Co., 1,285 ft. S, 1,000 ft. W, NE cor. sec. 7-1n-9w. Cg. 3,240 ft.

Webster Parish

J. L. Edwards No. 1 Hooper, 330 ft. S and E, NW cor. SW sec. 5-17-9. Fsg. for rotary slip, 2,550 ft.

J. P. Evans et al No. 1 T. Crichton, NE SE sec. 35-18-9. Drlg. 5,772-91 ft.

Ohio Oil Co. No. 1 R. L. Holloway, 660 ft. S, 760 ft. W, C sec. 33-21-10. Drlg. 7,254 ft.

SOUTH LOUISIANA FIELDS

Bayou Mallet—Acadia Parish

Superior Oil Co. No. 2 Bradley, sec. 47-7s-1e. T.D. 7,206 ft.; perf. csg. 6,990-7,000 ft.; flowed 120 bbls. of fluid per day; T.P. 350 lbs.; C.P. 600 lbs.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 31 Watkins, sec. 8-12s-12w. T.D. 5,587 ft.; P.B. to 5,387 ft.; fsg.

Shell Pet. Corp. No. 32 Watkins, 65 ft. S cor. sec. 18-12s-12w. Drlg. L. 2,834 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 34 State, sec. 34-23s-22e. Drlg. wtr. sd. 5,393 ft.

Texas Co. No. 36 State, Drlg. sd. 4,121 ft.

Texas Co. No. 38 State, 7⅝-in. csg. 3,885 ft.; T.D. 3,931 ft.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 13 School Land, sec. 16-14s-13w. Drlg. sh. 4,756 ft.

Burton Sutton No. 14 School Land, sec. 16-14s-13w. Drlg.

Burton-Sutton No. 3-A School Land, sec. 16-14s-13w. P.B. and sdtkd.; drlg. sh. 1,254 ft.

Humble-Magnolia No. 16 Cameron Meadows. Drlg. sh. 5,102 ft.

Chenevyille—Rapides Parish

Amerada Pet. Corp. No. 3 Weill, sec. 53-1s-2e. T.D. 5,719 ft.; cmtd. 7-in. csg.; I.P. 141 B.P.D.

Texas Co. No. 1 State (Andrade), sec. 5-15s-2e. Drlg. sh. 3,940 ft.

Texas Co. No. 1 Weihl, sec. 53-1s-2e. Rig.

Choctaw Dome—Iberville Parish

Standard Oil Co. No. 8 Myrtle Grove Williams, sec. 52-9s-11e. T.D. 5,828 ft.; P.B. to 2,450 ft. and sdtkd.; T.D. 4,045 ft.; rmg.

Darrow—Ascension Parish

Humble O. & R. Co. No. 11 Community, sec. 32-10s-2e. Drlg. sh. and L. 6,005 ft.

Humble O. & R. Co. No. 6 Gumbie, sec. 33-10s-2e. T.D. 6,157 ft.; P.B. to 3,017 ft.; sdtkd. at 3,027 ft.; abd. 6,094 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 2 State, sec. 5-22s-16e. Drlg. sh. 6,930 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 5 State, sec. 24-21s-16e. Drlg. sd. 5,012 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 1 Frost, sec. 11-9s-8w. T.D. 7,650 ft.; P.B. 5,267 ft.; flowed 126 bbls. of fluid per day; 6% b.s.&w.

Union Sulphur Co. No. 1 J. A. Bel estate, T.D. 7,683 ft.; P.B. to 7,030 ft.; tested S.W.; S.D.

Union Sulphur Co. No. 1 G. S. Cole, sec. 12-9s-8w. T.D. 6,655 ft.; P.B. 3,816 ft.; W.O.C.

Union Sulphur Co. No. 1 Green Acres, sec. 11-9s-8w. Drlg. sh. 3,730 ft.

Union Sulphur Co. No. 6 Powell Lbr. Co., sec. 12-9s-8w. T.D. 6,715 ft.; I.P. 500 B.P.D.; ¼-in. choke.

Union Sulphur Co. No. 7 Powell Lbr. Co., sec. 12-9s-8w. T.D. 6,731 ft.; 5-in. csg. 6,726 ft.

Hackberry—Cameron Parish

Calcasieu Oil Co. No. 6 Hanzen, sec. 14-12s-10w. T.D. 5,793 ft.; pulling csg.

Gulf Ref. Co. No. 20 Irwin, sec. 13-13s-10w. T.D. 7,806 ft.; stdtkd.; drlg. sh. 8,006 ft.

Stanolind O. & G. Co. No. 16-A School Land, sec. 16-12s-12w. Drlg. sh. 4,395 ft.

Stanolind O. & G. Co. No. 21-B Gulf Land, sec. 14-12s-10w. S.D. 6,963 ft.; top salt 6,948 ft.; P.B. and sdtkd.; drlg. sh. 5,337 ft.

Stanolind O. & G. Co. No. 23-B Gulf Land, sec. 14-12s-10w. Drlg.

Sutton Oil Co. No. 3 Duhon, sec. 22-12s-10w. Spudded.

Texas Co. No. 21 State, sec. 12-12s-10w. Drlg.

Texas Co. No. 19-B State, sec. 13-12s-9w. T.D. 6,724 ft.; P.B. to 4,638 ft.; sdtkd.; drlg. sh. 4,753 ft.

Iowa—Jefferson Davis Parish

Shell Pet. Corp. No. 7 Stafford, sec. 18-9s-7w. Cg. sd. 6,712 ft.

Shell Pet. Corp. No. 1 Zimmerman. T.D. 4,486 ft.; mixing mud.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 2 Banta, sec. 40-13s-9e. Drlg. sh. 3,280 ft.

Herton Oil Co. No. 3 Banta, sec. 40-13s-9e. Drlg. sh. 460 ft.

Herton Oil Co. No. 1 Carter, sec. 38-13s-9e. Drlg. sh. 7,363 ft.

Herton Oil Co. No. 2 Roane, sec. 40-13s-9e. T.D. 6,688 ft.; I.P. 36 B.P.H.; 5/16-in. choke; T.P. 1,000 lbs.; C.P. 1,025 lbs.

Jennings—Acadia Parish

Fred I. Getty No. 2 Jennings-Clements (W.O.), sec. 46-9s-2w. T.D. 2,300 ft.; prep. to test.

Reid Crude Oil Co. No. 9 Jennings. T.D. 2,087 ft.; 7-in. csg. 2,062 ft.; W.O.C.

Shell Pet. Corp. No. 1 Conover, sec. 46-9s-2w. Topped oil sd. 6,813 ft.; cg. sd. 6,814 ft.

Stanolind O. & G. Co. No. 16 Houssiere-Latrielle, sec. 47-9s-2w. Drlg. 5,405 ft.

Lafitte—Jefferson Parish

Texas Co. No. 4 Lafitte, sec. 20-17s-24e. Drlg. sd. and sh. 7,687 ft.

Texas Co. No. 4 Rigolettes Fur Co., sec. 29-17s-24e. Sh. 2,437 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State. Drlg. sh. 3,330 ft.

Texas Co. No. 39 State, sec. 20-12s-20e. Drlg. sh. 3,910 ft.

Leesville—LaFourche Parish

Delta Oil Co. No. 1 Constantine, sec. 34-21s-22e. Drlg. sh. 2,300 ft.

Lincoln Oil Co. No. 3 Constentine, sec. 27-21s-22e. T.D. 5,133 ft.; salt; P.B. 3,728 ft.; rmg.

Texas Co. No. 45 Leesville, sec. 34-21s-22e. T.D. 5,266 ft.; salt; P.B. 3,025 ft.; W.O.C.

Texas Co. No. 46 Leesville, sec. 27-21s-22e. T.D. 3,925 ft.; 7⅝-in. csg. 3,896 ft.; W.O.C.

Texas Co. No. 47 Leesville, sec. 27-21s-22e. Drlg.

New Iberia—Iberia Parish

Canal Oil Co. No. 3 Sabatier, sec. 54-13-7e. S.D. 3,180 ft.; in salt.

Kitos Oil Co. No. 2-A Sealey, sec. 56-12s-7e. Cg. sd. 4,319 ft.

Teche Oil Co. No. 1 Schwing, sec. 52-12s-7e. S.D. 3,400 ft.

Texas Co. No. 1 Smith, sec. 72-12s-7e. Drlg. sh. 5,179 ft.

Roanoke—Jefferson Davis Parish

Gulf Oil Corp. No. 2-B Anding, sec. 2-9s-4w. Drlg. sh. 1,706 ft.

Humble O. & R. Co. No. 3 C. N. Tayler, sec. 12-9s-4w. Cg. sd. 8,801 ft.

Humble O. & R. Co. No. 4-B Devilbiss, sec. 11-9s-4w. Drlg.

Shell Pet. Corp. No. 5 Kratzer, sec. 12-9s-4w. T.D. 8,681 ft.; rng. csg.

Port Barre—St. Landry Parish

Emerson Corp. No. 4 Sibille, sec. 29-6s-5e. T.D. 3,420 ft.; 7-in. csg. 3,410 ft.; failed to flow; R.U. pump.

Pacheon Oil Co. No. 1 Gauden, Sec. 4-6s-6e. T.D. 3,718 ft.; perf. above 3,687 ft.; abd.

Pan American Prod. Co. No. 2 Colmier, sec. 4-6s-5e. R.U.

Pan American Prod. Co. No. 1 Watkins. Abd. 6,193 ft.

Texas Co. No. 1 Futral, sec. 20-6s-5e. Drlg. sh. 5,075 ft.

Texas Co. No. 1 Lahaye, sec. 4-6s-5e. R.U.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 18-11s-6e. Drlg. sh. 8,125 ft.

Tide Water Oil Co. No. 2 Smedes, sec. 57-11s-6e. T.D. 8,735 ft.; P.B. to 6,650 ft.; showed 275 lbs. pres. on D.S.T., 6,640-55 ft.; will comp. for gas well.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 4 United land, sec. 15-10s-4e. T.D. 4,332 ft.; 7-in. csg. at 4,291 ft.; S.D.

Sorrento Oil Co. No. 1 Bernard, sec. 9-10s-4e. Derrick.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 824 fee, sec. 20-9s-10w. T.D. 4,526 ft.; P.B. 2,825 ft.; W.O.C.

Tepetate—Acadia Parish

Continental Oil Co. No. 1 Hugh Breckenridge, sec. 29-7s-2w. 1,520 ft. 10¾-in. csg. 1,482 ft.

Continental Oil Co. No. 1 P. Johnson, sec. 30-7s-2w. Drlg. sdy. L. 7,339 ft.

Continental Oil Co. No. 1 Sonnier, sec. 29-7s-2w. Cg. sd. 8,300 ft.

Continental Oil Co. No. 1 Adras Young, sec. 29-7s-2w. T.D. 8,318 ft.; I.P. 260 B.P.D.; ¼-in. choke; C.P. 2,450 lbs.; T.P. 1,950 lbs.

Continental Oil Co. No. 2 L. L. Welch, sec. 28-7s-2w. Drlg.

General Crude Oil Co. No. 1 Vincent, sec. 31-7s-2w. Drlg. sd. 7,953 ft.

Loffland Bros. No. 1-A L. C. Bowles, sec. 28-7s-2w. Drlg. sh. 8,402 ft.

Loffland Bros. No. 1-B L. C. Bowles, sec. 28-7s-2w. Drlg. sh. 8,262 ft.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. R.U.

Wilson Broach No. 19 Wilson Strip, sec. 33-10s-12w. Drlg. sh. 4,127 ft.

White Castle—Iberville Parish

Shell Pet. Corp. No. 3 Shingle, 650 ft. S, 600 ft. E of NW cor. sec. 12-11s-12e. Drlg. 2,963 ft.

S. LOUISIANA WILDCATS

Acadia Parish

Magnolia Pet. Co. No. 1 Homeseekers Dev. Co., sec. 54-10s-1w. Drlg. sh. 5,604 ft.

Allen Parish

Humble O. & R. Co. No. 1 J. A. Bell, sec. 28-6s-7w. Drlg. sh. 5,707 ft.

Avoyelles Parish

Frost Oil Co. No. 1 Hinds Lbr. Co., sec. 3-3n-4e. R.U.

Cameron Parish

Magnolia Pet. Co. No. 1 Hebert, sec. 13-12s-9w. Drlg. sh. 5,100 ft.

East Feliciana Parish

East Feliciana Oil Co. No. 1 Rider, sec. 58-1s-1w. Drlg.

Iberia Parish

Jefferson Lake Oil Co. No. 1 State, Twp. 12s-5e. T.D. 8,610 ft.; preparing to test through perforation 8,452-79 ft.; S.D.

Jefferson Lake Oil Co. No. 322 State Lake Pleigneur. S.D. 5,690 ft.

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Lacassan, sec. 20-11s-5w. T.D. 9,229 ft.; rmg. 8,775 ft.

Livingston Parish

Bunte O. & G. Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drlg.

Plaquemines Parish

Venice Corp. No. 1 Manhattan L. & F. Co., sec. 26-21s-29e. S.D. 3,512 ft.

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, sec 6-12s-5e. Drlg. sdy. L. 6,391 ft.

St. Landry Parish

Limited Oil Co. No. 1 Miller Est., sec. 47-8s-4e. Drlg. sh. and shells 7,000 ft.

St. Martin Parish

Southern Oil (S. C. Yingling et al) No. 1 State, sec. 13-9s-8w. T.D. 3,172 ft.; tested S.W.; pulling csg. to deepen.

Texas Co. No. 2 State, sec. 14-10s-9e. R.U.

Texas Co. No. 8 St. Martins Land, sec. 17 8s-7e. T.D. 3,213 ft.; D.S. stuck; shot off at 5,050 ft.; now pulling.

S. C. Yingling et al No. 2 State, sec. 13-9s-8w. Driving piling.

Terrebonne Parish

Humble O. & R. Co. No. 1 Continental Land & Fur Co., sec. 30-17s-14e. Moving in.

Vermillion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. Drlg. sh. 3,498 ft.

Louisiana Land & Expl. Co. No. 1 La. Fur Co., sec. 16-15-1e. Drk.

TEXAS

Week Ending May 2

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 6 Hardy, Wm. Smeathers Sur. T.D. 2,227 ft.; P.B. to 2,215 ft.; swbd. dry and S.D.

Humble O. & R. Co. No. 9 Wilson, Wm. Harvey Sur. 10¾-in. csg. at 110 ft.; drlg. sh. 2,433 ft.

Damon Mound—Brazoria County

Sinclair Prairie Oil Co. No. 23 Jackson, H. Darst Sur. T.D. 870 ft.; no report.

Hastings—Brazoria County

Humble O. & R. Co. No. 2-B Cannon, H. T.&B. Sur. T.D. 1,830 ft.; 10¾-in. csg. at 1,824 ft.; W.O.C.

Stanolind O. & G. Co. No. 3 J. W. Miller, A.C.H.&B. Sur. No. 2. T.D. 6,066 ft.; 7-in. csg. at 5,996 ft.; drlg. plug.

Stanolind O. & G. Co. No. 1 Brown, H.T. &B. Sur. Drk.

Stanolind O. & G. Co. No. 2 Brown, H.T. &B. Sur. No. 29. T.D. 6,050 ft.; 7-in. csg. at 5,859 ft.

Stanolind O. & G. Co. No. 3 Cannon, H. T.&B. Sur. No. 36. Drlg. sh. 4,647 ft.

Stanolind O. & G. Co. No. 1 Jimmie Sneed, Jimmie Sneed Sur. Cg. sh. 5,960 ft.

Stanolind O. & G. Co. No. 5 B. L. Turner, A.C.H.&B. Sur. No. 1. Drk.

Stanolind O. & G. Co. No. 4 Williams, A.C.H.&B. Sur. No. 1. Drlg. sd. 4,282 ft.

Stanolind O. & G. Co. No. 4 Wooster, A. C.H.&B. Sur. No. 1. T.D. 1,334 ft.; fsg.

Manvel—Brazoria County

Texas Co. No. 21-B Belcher, H. N. Little Sur. T.D. 5,150 ft.; 7-in. csg. at 5,125. ft.; I.P. 480 B.P.D.; ¼-in. choke.

Texas Co. No. 22-B Belcher, H. N. Little Sur. Drlg. sh. 1,130 ft.

Texas Co. No. 23-B Belcher, H. N. Little Sur. Drk.

Texas Co. No. 5 O. L. Rash, T. Sproggins Sur. T.D. 4,135 ft.; I.P. 367 B.P.D.

Uscan Oil Co. No. 1 Wilson, H.T.&B. Sur. No. 23. T.D. 4,030 ft.; P.B. to 4,000 ft.; 7-in. csg. 4,015 ft.; pulling screen.

Anahuac—Chambers County

Humble O. & R. Co. No. 10 Clark, H.&T. C. Sur. T.D. 7,052 ft.; 7-in. csg. at 7,042 ft.; W.O.C.

Humble O. & R. Co. No. 12 Engels, sec. 50, H.&T.C. Sur. T.D. 7,052 ft.; T.S. 7,016 ft.; prep. to set csg.

Humble O. & R. Co. No. 2 Grippon, H.&T. C. Sur. T.D. 7,095 ft.; 7-in. csg. at 7,060 ft.; drlg. plugs.

Humble O. & R. Co. No. 2 Marshall, H.& T.C. Sur. T.D. 7,085 ft.; I.P. 22 B.P.H.; ¼-in. choke; T.P. 985 lbs.

Humble O. & R. Co. No. 4 Zappe, H.T.& C. Sur. R.U.

Humble O. & R. Co. No. 2 Tyrell, H.&T. C. Sur. Cg. sd. 7,034 ft.

Humble O. & R. Co. No. 9 White, James McGahey Sur. T.D. 7,107 ft.; 7-in. csg. at 7,090 ft.

Sun Oil Co. No. 11 White, J. McGahey Sur. T.D. 7,054 ft.; 7-in. csg. at 7,036 ft.; I.P. 27 B.P.H.; ¼-in. choke.

Sun Oil Co. No. 13 White, James McGahey Sur. Drlg. sdy. sh. 1,735 ft.

Sun Oil Co. No. 14 White, James McGahey Sur. Drlg. L. and shells 5,696 ft.

Sun Oil Co. No. 15 White J. McGahey Sur. Drk.

Sun Oil Co. No. 18 White, J. McGahey Sur. Drk.

Barbers Hill—Chambers County

Sinclair Prairie No. 19 Wilborn, Henry Griffith Sur. W.O.C. 5,266 ft.; comp.; no gauge.

Stanolind O. & G. Co.'s No. 29 Chambers Wm. Bloodgood Sur. Derrick.

Cotton Lake—Chambers County

Salt Dome Oil Co. No. 1 A. B. Lawrence, Solomon Barrow Sur. Drk.

Salt Dome Oil Co. No. 2 Lawrence, T.D. 6,661 ft.; drlg. S.W. sd. 7,000 ft.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 2 Middleton, M. A. Carroll Sur. T.D. 6,469 ft.; 7-in. csg. at 6,397 ft.; failed to flow; swbg.

Stanolind O. & G. Co.-State No. 1 Turtle Bay. T.D. sdtkd. hole 6,618 ft.; 7-in. csg. at 6,606 ft.; failed to flow; swbg.

Stanolind O. & G. Co. No. 2 State. M.I.R.

Big Creek—Fort Bend County

Gulf Oil Corp. No. 68 Davis, M. Young Sur. Drlg. sh. 4,579 ft.

Blue Ridge—Fort Bend County

Ben Barnett No. 1 Blakely, E. Drew Sur. T.D. 2,058 ft.; I.P. 35 B.P.D. on pump.

Ben Barnett No. 2 Blakely, E. Drew Sur. R.U.

Mills Bennett No. 4 Luscher, T. Habermacher Sur. Drlg. sh. 5,280 ft.; (cor.).

Trans State Oil Co. No. 2 Blakely, E. Drew Sur. T.D. 3,956 ft.; rmg. to set csg.

D. M. Wallace and Woodley Pet. Co. No. 2 Blakely, E. Drew Sur. T.D. 2,963 ft.; P.B. to 2,938 ft.; S.D. at 3,613 ft.

Orchard—Fort Bend County

Gulf Prod. Co. No. 44 Moore, Leo Burknapp Sur. Drlg. sh. 6,020 ft.

Gulf Ref. Co. No. 45 Moore, German Immigration Sur. No. 8. Sd. 6,705 ft.; abd.

Thompson—Fort Bend County

Sterling O. & R. Co. No. 1 F. I. Booth, H. Chrisman Sur. R.U.

High Island—Galveston County

Stanolind O. & G. Co. No. 5 B.&N.O., Fitzsimmons Sur. T.D. 6,477 ft.; P.B. 5,795 ft.; 7-in. csg. at 5,755 ft.; P.B. to 5,785 ft.; prep. to perf. 5,750-80 ft.

Stanolind O. & G. Co No. 55 Cade, Wm Hudson Sur. T.D. 5,126 ft.; swbd. 180 B. P.D.; lost swab.

Stanolind O. & G. Co. No. 56 Cade, N. Fitzsimmons Sur. Drk.

Stanolind O. & G. Co. No. 1 Cooper, M. Dunman Sur. Bldg. drk.

Stanolind Oil & Gas Co No. 18-B Smith Royalty, M. Dunman Sur. Drlg. sh. and L. 4,935 ft.

Dickinson—Galveston County

Humble O. & R. Co. No. 2 Magie, J. S. Jones Sur. T.D. 3,040 ft.; rng. 7-in. csg.; I.P. 18 B.P.H.; ¼-in. choke; T.P. 1,500 lbs.; C.P. 1,450 ft.

Humble O. & R. Co. No. 3 E. E. Townes, J. S. Jones Sur. T.D. 2,024 ft.; 10¾-in. csg. 2,011 ft.

Humble O. & R. Co. No. 2-B Bayou Dev. Co., J. Sellers Sur. T.D. 9,107 ft.; P.B. to 8,270 ft.; 7-in. csg. at 8,255 ft.; 32-min. D.S.T. from 8,255-90 ft. recovered 87 stands S.W.; 600 lbs. pres.

Humble O. & R. Co. No. 7-A Stewart, J. Sellers Sur. T.D. 8,035 ft.; 7-in. csg. at 8,017 ft.; I.P. 24 B.P.H.; ¼-in. choke; T.P. 1,450 ft.; C.P. 1,450 ft.

Humble O. & R. Co. No. 7-B Stewart, John Sellers Sur. R.U.

Ken Ben Oil Co. No. 1 Stewart, W. K. Wilson Sur. Drlg. sh. 5,637 ft.

Pure Oil Co. No. 6 Sheiar, H B R&C Sur. T.D. 8,052 ft.; 7-in. csg. 8,025 ft.; **swbd. fluid level at 3,000 ft.; 1,300 lbs. gas pressure; prep. to W.O.**

Stanolind O. & G. Co. No. 4 State, Tr. No. 3. Drlg. sdy. sh. 5,075 ft.

Stanolind O. & G. Co. No. 5 State, Tract 3. Drlg. sh. 6,875 ft.

Batson—Hardin County

Nimrod Prod. Co. No. 1 Butler, W. Donoho Sur. W.O.C. 1,050 ft.

Saratoga—Hardin County

John Deering No. 1 Teel, Thomas Gaines Sur. Drlg. sh. 1,100 ft.

Humble—Harris County

Texas Co. No. 272 Landslide, R. D. Unman Sur. Drlg. gbo. and L. 1,690 ft.

Pierce Junction—Harris County

Gulf Oil Corp. No. 3 Manchester, J. A. Williams Sur. Drlg. sd. 4,255 ft.

Harrison and Abercrombie No. 8 Ritter J. Hamilton Sur. T.D. 5,535 ft.; P.B. hole 4,883 ft.; I.P. 50. B.P.H.; ½-in. choke.

Mykawa—Harris County

West Prod. Co. No. 9 Irwin, W. B. Walker Sur. Sdy. sh. 4,936 ft.; no report.

West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. R.U.

South Houston—Harris County

Dick Schwab No. 1 T. Bennett, H.T.&B. Sur. No. 5. T.D. 4,677 ft.; W.O.C.

Smith & McDannald No. 1 Phillips, H.T. &B. Sur. No. 6. W.O.C. 1,367 ft.

Stanolind O. & G. Co. No. 1 Funk, Callahan & Vince Sur. 16-in. csg. at 90 ft.; W.O.C.

Stanolind O. & G. Co. No. 1 W. A. Griffin, H.T.&B. Sur. No. 4. Cellar.

Stanolind O. & G. Co. District No. 36, H. T.&B. Sur. T.D. 4,602 ft.; 7-in. csg. at 4,567 ft.; I.P. 13 bbls. oil, 4,000,000 ft. of gas in 3½ hrs.; T.P. 1,575 lbs.; C.P. 1,575 lbs.

Stanolind O. & G. Co. District No. 23, H. T.&B. Sur. No. 5. R.U.

Stanolind O. & G. Co. No. 1 Schwartz, H.T.&B. Sur. No. 6. Drlg. sh. 1,409 ft.

Tomball—Harris County

Humble O. & R. Co. No. 1 Holderrath, C. N. Pillot Sur. T.D. 5,559 ft.; 7-in. csg. at 5,552 ft.; W.O.C.

Humble O. & R. Co. No. 2 Mahaffey, J. Pruitt Sur. Drlg. sh. 4,987 ft.

Humble-Magnolia No. 12 J. D. Reid C. Goodrich Sur. Sh. at 2,910 ft.; no report.

Humble O. & R. Co. No. 7-A Quilter, Senchell Sur. T.D. 5,560 ft.; I.P. 27 B. P.H.; ¼-in. choke; T.P. 850 lbs.; C.P. 900 lbs.

Humble O. & R. Co. No. 1 Wilson, Ralph Hubbard Sur. 10¾-in. csg. at 923 ft.

Maurits—Jackson County

Shell Pet. Corp. No. 2 C. F. Combs, Morris & Cummings Sur. Drlg. sh. 5,703 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 2 Guinn, C. Williams Sur. T.D. 6,423 ft.; 15-min. D. S.T. from 6,345-61 ft.; ⅝-in. choke recovered 1,350 ft. mud cut with S.W.

Humble O. & R. Co. No. 1 Pinchback, C. Williams Sur. Drlg. sh. 3,012 ft.

Glenn McCarthy No. 2 Bessie Lonke, H Williams Sur. T.D. 5,581 ft.; started flowing oil and S.W.; caught fire; hole bridged and abd.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 3-A Pipkin and Davis, Wm. McFaddin Sur. Drlg. sh. 4,476 ft.

Fannett—Jefferson County

Gulf Oil Corp. No. 18 Thomas, W. H. Smith Sur. Drlg. 5,451 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 14-C Kirby, C. J. Pleasant Sur. T.D. 5,920 ft.; I.P. 40 B.P.D.

Esperson—Liberty County

Crown Pet. Co. No. 1 Davis, D. Kokernot Sur. Drlg. sh. 6,315 ft.

General Crude Oil Co. No. 14 Davis, D. Kokernot Sur. D.&A. at 4,144 ft.

General Crude Oil Co. No. 15 Davis, D. L. Kokernot Sur. Drlg. sdy. sh. 2,830 ft.

General Crude Oil Co. No. 24 Esperson, Wm. Bloodgood Sur. T.D. 2,825 ft.; I.P. 40B.P.D. on pump.

Hankamer—Liberty County

Gulf Oil Corp. No. 24 Boyd, Amos Allen Sur. Drlg. sh. 4,660 ft.

Gulf Oil Corp. No. 6 Crow and Jacobs, H.T.&C. Sur. No. 21. T.D. 5,380 ft.; P.B. to 3,675 ft.; drlg. sd. 3,926 ft.

Uscan Oil Co. No. 5 Ezzell, Levi Borrow Sur. Drlg. sh. 2,200 ft.

Hardin—Liberty County

Atlantic Oil & Prod. Co. et al No. 1 Hardy, James Robinson Sur. T.D. 3,110 ft.; 7-in. csg. 3,050 ft.; prep. to test.

Hull—Liberty County

Republic-Houston No. 160 Dolbear, J. Devore Sur. M.I.R.

Markham—Matagorda County

Hamill & Hamill No. 1 Poor Boy Smith, H. Parker Sur. R.U.

Van Vleck—Matagorda County

Skelly Oil Co. No. 1 Langham, M. Cummings Sur. Drlg. sh. 7,009 ft.

Skelly Oil Co. No. 2 Metzler, M. Cummins Sur. Drk.

Skelly Oil Co. No. 1 Rugelsey. I.&G.N. Sur. No. 267. Drlg. sh. 3,330 ft.

Skelly Oil Co. No. 6-B Kobb, M. Cummings Sur. Drlg. sh. 2,927 ft.

Conroe—Montgomery County

Humble O. & R. Co. No. 13 Dobbin, Ransom House Sur. T.D. 5,080 ft.; I.P. 53 B.P.H.; ¼-in. choke; T.P. 430 lbs.

Humble O. & R. Co. No. 79-A South Tex. Dev. Co., Theo. Slade Sur. Drlg. sh. 493 ft.

Sun Oil Co. No. 26 Foster. T.D. 5,122 ft.; 7-in. csg. at 5,018 ft.

Splendora—Montgomery County

Tide Water Oil Co.-Darby Pet. Co. No. 1 W. C. and Ella Corbett, Josiah Blackman Sur. R.U.

Orange—Orange County

Texas Canadian Oil Co. No. 1 Bland, James Dyson Sur. Drlg. sh. 5,027 ft.

Port Neches—Orange County

Texas Co. No. 6-B Polk, J Beaumont Sur T.D. 6,952 ft.; T.D. sdtkd. hole 4,966 ft.

Greta—Refugio County

Hewitt & Daugherty No. 23 Lambert, Hardwick Sur. Drlg. sh. 5,930 ft.

United Gas Co. No. 24 Lambert-Hardwick Sur. Drlg. sh. 3,847 ft.

Refugio—Refugio County

D. & D. Oil Co. No. 3, Heard townsite. Cg. sh. 4,100 ft.

United Gas Co. No. 17 Fox Hews Survey T.D. 6,259 ft.; 5-in. csg. 6,248 ft.; tested S.W.; recmtd.; fsg.

United Gas Co. No. 7 Ryalls, Refugio townsite. R.U.

Tomoconnor—Refugio County

Quintana Pet. Corp. No. 34-A Tom O'Connor, Swisher Sur. T.D. 6,495 ft.; P.B. and set 7-in. csg. 5,745 ft.; I.P. 55 B. P.H.

Quintana Pet. Co. No. 35-A Tom O'Connor, Swisher Sur. Spudded.

Quintana Pet. Co. No. 1-C Tom O'Connor, Carr & Connell Sur. Rig.

Coletto Creek—Victoria County

American Liberty Oil Co. No. 3 Gaughler, R. Manchola Sur. T.D. 2,830 ft.; 7-in. csg. at 2,857 ft.

Keeran—Victoria County

Gulf Oil Corp. No. 8 Keeran, DeLeon Sur. T.D. 5,416 ft.; washing to bottom.

Placedo—Victoria County

Barnsdall-Costa No. 3 Wheless, S.A.&M. G. Sur. No. 8. T.D. 4,763 ft.; 7-in. csg. at 4,753 ft.; rng. screen.

Benson-Jones No. 1 J. A. Janis, W. Rupley Sur. T.D. 4,744 ft.; set 7-in. on bottom.

Crown Central Oil Co. No. 2 Gebrover, J. M. Bronson Sur. T.D. 4,764 ft.; P.B. to 4,564 ft.

Eastern Texas Pet. Co. No. 1 J. Hasek, S.A.&M.G. Sur. T.D. 4,773 ft.; I.P. 7 B. B.H.; ¼-in. choke; T.P. 100 lbs.; C.P. 150 lbs.

Harrison & Abercrombie No. 1 L. O. Sturdevant, S.A.&M.G. Sur. 10-in. csg. at 856 ft.

Sun Oil Co. No. 2 Schneeder, Wm. Rupley Sur. Drlg. sh. and L. 4,729 ft.

Clay Creek—Washington County

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. Drlg. sh. 3,700 ft.

Louise—Wharton County

Pure Oil Co. No. 1 Cochran, M.&C. Sur., sec. 29. R.U.

Fure Oil Co. No. 1 McIntyre, Morris-Cummings Sur. T.D. 1,212 ft.

Pickett Ridge—Wharton County

Texas Co. No. 3 Marek, George Reynolds Sur. Drlg. sh. 3,869 ft.

Texas Co. No. 14-A Pierce, I.&G.N. Sur. No. 39. T.D. 4,709 ft.; perf. 4,698-4,709 ft.; rng. screen.

Texas Co. No. 17-A Pierce, I.&G.N. Sur. T.D. 4,709 ft.; 7-in. csg. at 4,697 ft.; drlg. plug.

Texas Co. No. 18-A Pierce, I.&G.N. Sur. T.D. 4,713 ft.; 7-in. 4,703 ft.

Texas Co. No 20-A Pierce, I.&G.N. Sur. Drk.

Withers—Wharton County

Texas Co. No. 1-B Pierce, E.T. R.R. Sur., Abst. No. 103. Drlg. sh. 5,583 ft.

Texas Co. No. 4-C Pierce, J. Caldwell Sur. T.D. 5,560 ft.; 7-in. csg. at 5,551 ft.; drlg. plug.

Texas Co. No. 5-C Pierce, C. J. Caldwell Sur. Drlg. sd. and L. 5,529 ft.

GULF COAST WILDCATS

Brazoria County

Gulf Oil Corp. No. 1 Fairfield, A. Robinson Sur. T.D. 3,398 ft.; prep. to test.

Strake Oil Corp. et al No. 1 D. K. Poole-J. W. Hardin Sur. Washing over stuck D.S.

Texas Co. No. 3 Freeport Sulphur Co., C. Areola Sur. 13⅜-in. csg. 3,990 ft.; W. O.C.

Texas Gulf Prod. Co. No. 1 Sparks. T.D. 3,948 ft.; 7⅝-in. csg. set 3,937 ft.

Chambers County

Glenn H. McCarthy No. 1 Pitt, J. M. Duran Sur. Drlg. sh. 6,095 ft.

Calhoun County

Continental Oil Co. No. 1 T. Vandenberg, sec. 12, Blk. H. Moving in.

Humble O. & R. Co. No. 2 Welder, Jose Maria Rios Sur. No. 1. Drlg. sd. 5,350 ft.

Fayette County

Ben G. Barnett No. 1 McKinnon, A. Zumwalt Sur. T.D. 3,140 ft.; washing over stuck D.S.

Galveston County

Coastal Mineral Dev. Co. No. 1 Joslin, Sarah McKissick Sur. Drlg. sh. 5,456 ft.

Sun Oil Co. No. J. D. Hughes, W. M. Baker Sur. T.D. 8,613 ft.; milling at 8,383 ft.

Grimes County

Crook Bros. No. 1 W. W. and J. C. Greir. S.D. 268 ft.

Hardin County

Jack Frazier No. 1-A Olive Sternberg, J. Houston Sur. Drlg. sh. 5,930 ft.

S. Hindman No. 1 Howth, A. J. Cotton Sur. S.D. 2,790 ft.

David B. MacDaniel No. 1 Nona Mills, E. E. Manvel Sur. Drlg. sh. 5,160 ft.

Harris County

Amerada Pet. Corp. et al No. 1 Dopslout C.W.R.R. Sur., Blk. 1, sec. 2. Drlg. sd. 2,365 ft.

Amerada Pet. Corp. No. 1 Nellie Esperson, George Patrick Sur. Abd. 6,505 ft.

Bunte O. & G. Co. No. 1 Lobit et al, Benjamin Barrow Sur. Drk.

Jefferson County

Magnolia Pet. Co. No. 1 Funches, sec. 16, H.T.&B. Sur. T.D. 6,765 ft.; prep. to drill ahead.

Sun Oil Co. No. 1 Herbert & Broussard, B. Blackman Sur., Abst. No. 2. T.D. 8,824 ft.; drlg. sh. in sdtkd. hole 7,104 ft.

Lavaca County

Goode et al No. 1 J. H. Staffa, W. B. Hensley Sur. Drlg. sh. 2,638 ft.

Matagorda County

Continental Oil Co. No. 1 Feltz, J. Criswell Sur. T.D. 7,629 ft.; drlg. in sdtkd. hole 6,257 ft.

John Deering No. 1 Estelle, Tone and Jameson Sur. T.D. 6,885 ft.; fsg.

Heimerich & Payne, No. 1 Hawkins, D. McCarthy Sur. T.D. 7,816 ft.; P.B. to

3,700 ft.; prep. to test through perftns.
Sun Oil Co. No. 1 Craig, Thomas Williams Sur. Drlg. sh. 6,053 ft.

Montgomery County

Chapman and Smith No. 1 Delta Land & Timber Co., T. Shepperd Sur. No. A-488. S.D. 4,012 ft.

Mid-Texas Oil Co. No. 1 Security Trust. G. W. Loonin Sur. Drlg. sh. 3,200 ft.

Wm. Thompson et al No. 2 Scott, F. A. Wheeler Sur. Drlg. sh. 3,637 ft.

Victoria County

Rowan-Hope No. 1 Scheel, J. M. Escallera Sur. Drlg. sh. 4,381 ft.

Wharton County

Pure Oil Co. No. 1 Paige, James Pirie Sur T.D. 9,200 ft.; perf. 7,680-7,700 ft.; to test.

S. W. TEXAS WILDCATS

Aransas County

Buckingham Oil Co. No. 1 McCampbell, sec. 41-42, James Arids Sur. T.D. 7,501 ft.; recovering 6,200-ft. pipe.

Atascosa County

Atascosa Trust No. 1 Domsch, 100 ft. S line, 300 ft. E line, 152-ac. lease, J. T. Russell Sur. 1,322. Cd. sat. 3,467-3,500 ft.; cg. deeper.

Bee County

Marine Oil Co. No. 1 Ray, 360 ft. E line, 330 ft. N line, 40-ac. tr., Anna Birks Sur. No report.

H. A. Pressey No. 1 Hicks, 1,650 ft. of S line, 150 ft. of W line, lease, J. Uranga grant. S.D. 3,468 ft.

Brooks County

California Co. No. 1 B. Garcia, 465 ft. N and W lines lease, B. Garcia tract, Salinas Sur. Cg. 6,010 ft.

Burleson County

Walter Blumenthal No. 1 Crane, W. C. Pierce Sur. No. 297. T.D. 6,328 ft.; P.B. 6,320 ft.; D.&A.

Dewitt County

Universal Oil, Gas & Mining Co. No. 1 Schnebel, 330 ft. S and W lines tr., Fitzgerald Sur. No report.

Duval County

Atlantic Oil Prod. Co. and Darby Pet. Corp. No. 1-F Welder, 2,310 ft. N and E lines, Sur. 552. R.U.

C. G. Glasscock No. 1 Milano Land & Garden Co., Sur. 87. T.D. 2,195 ft.; S.D.

Frank Gravis No. 1 C. K. Gravis, 1,650 ft. SE line, 990 ft. SW line, Sur. 250. Cg. 5,007 ft.

Hamil & Smith No. 1 Hubbard, sec. 69. Drlg. 2,394 ft.

Kepley Prod. Co. No. 1 Sevier, 330 ft. S line, 1,320 ft. E line, Sur. 71. T.D. 3,-410 ft.; P.B. 3,233 ft.; W.O.C.

Magnolia Pet. Co. No. 1 Gray ranch, 330 ft. S and E lines, Sur. 556. Cg. 3,449 ft.

Cabildo Oil Corp. No. 1 Tinney, Sur. 8. Drlg. 3,557 ft.

Santa Clara Oil Co. (Atkins & O'Neil) No. 1 W. Serna, 330 ft. S and E lines, sec. 521. Loc.

Stanolind O. & G. Co. No. 2 Farmers Life Ins. Co., 330 ft. S and E lines, Sur. 559. T.D. 3,512 ft.; D.&A.

Edwards County

Paul Teas No. 1 Stewart, C SE¼ sec. 2 G.C.&S.F. Sur. S.D. 5,270 ft.

Goliad County

Cotton Belt O. & G. Co. No. 1 Lutenbacher, 330 ft. S and W lines, Blk. 25 Goliad townsite. Sd. 5,544-45 ft.; blew out and bridged; stdg.

Magnolia Pet. Co. No. 1 Tipton, 330 ft. SE and SW lines, Thorman Sur. T.D. 4,496 ft.; rmg. down.

Gonzales County

Tull et al No. 1 Boska, 800 ft. S and E lines tr., McClure Sur. T.D. 1,956 ft.; stdg.

Guadalupe County

Paul Armstrong and J. E. Clark No. 1 Brodnaux, 150 ft. SE cor. 36-ac. tr., King Sur. Drlg. 2,431 ft.

J. E. Clark No. 1 Anderson, Green DeWitte Sur. Drlg. 515 ft.

J. E. Clark No. 1 Williams, DeWitte Sur. Drlg. 1,220 ft.

Hidalgo County

Gerald O. & G. Co. No. 1 Nelson Mortgage Co., Blk. 38, Lot A, LaDonna Tr. Drlg. sh. 3,162 ft.

Gulf States Oil Co. No. 3 John Engleman, Lot 3, Blk. 70. Sd. 6,365-73 ft.; gas; drlg. 6,461 ft.

Helen K. Maxwell No. 1 Hidalgo Wtr. Dist. No. 2, Lot 11, Blk. 20, Alamo Land & Sugar Co. Subd., Alamo Tr. Perf. 650-56 ft.; bailing Wtr. S.O.

Quintana Petroleum Co. No. 1 John C. Engleman, Lot 10, Blk. 94, Las Mestanas grant. Cg. 6,392 ft.

Jim Hogg County

French Oil Co. No. 1 Rodriguez, Sh. 8 Sur. 579, El Reyoto grant. Drlg. 1,256 ft.

Knode et al No. 1 Saunders, Sh. 3, Sur. 17, Las Animas grant. Loc.

S. L. Miller No. 2 Yeager, 777 ft. S line, 150 ft. E line, Blk. 6, Sur. 20. Drlg. 3,-117 ft.

Jim Wells County

Gist & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines, Sur. 151. Spudded.

G. M. Richardson No. 1 Garrett, 1,980 ft. S line, 1,640 ft. E line, sec. 5. T.D. 5,-810 ft.; stdg.

Texon Roy. Co. and Lucey No. 1 Rolston, 330 ft. N and W lines, sec. 17, King Farm Lots. Sd. 5,380-90 ft.; comp.; 244 B.P.D. on 5/32-in. choke; T.P. 660 lbs.; C.P. 380 lbs.

Karnes County

DeGraffe & Reele No. 1 Cochran, 460 ft. E line, 160 ft. S line, McConnell League. Spudded in.

Kerr County

Auld & Evans No. 1 Heffner, 660 ft. N line, 330 ft. E line, sec. 13. Drlg. 1,-685 ft.

Eastland Oil Co. No. 7 Love, 660 ft. S Evans & Gant No. 1 Love, Martinez Sur No. 1,594. Drlg. 2,172 ft.

LaSalle County

Davenport & Talbott No. 1 Watkins, 1,-610 ft. S line, 330 ft. E line, Sur. 103. Drlg. 3,128 ft.

Paul Meader No. 1 Reed, sec. 136. Fag. 2,790 ft.

Live Oak County

W. A. Brooks No. 1 Terrill, 1,000 ft. NE R.R., 1,500 ft. S line lse., Juan Houligan Sur. Drlg. 1,011 ft.

Dirks Bros. et al No. 1 Agnes Troell, 330 ft. SE and SW lines, 418-ac. tr., Thos. Pen Sur. Drlg. 2,884 ft.

R. H. Feltner No. 1 J. T. Carter, 1,847 ft. NW line, 350 ft. NE line, 120-ac. tract sec. 319. T.D. 3,466 ft.; set whipstock 2,840 ft.; stdg.

Inter-Allied Pet. Co. No. 1 Aetna Life Ins. Co., 660 ft. NW and SW lines, Pointevent Sur. 3, Abst. 336. Drk.

Windsor Oil Co. No. 1 B. E. Stolte, cen. tr., Wm. Kundy 3,690-ac. blk. M.I.M.

McMullen County

John F. Camp. No. 3 Byrne, 100-ac. tr., B. Odem Sur. T.D. 490 ft.; S.D.

R. J. Hill No. 1 Richardson, Sur. 154. Set sur. csg.; drlg. 1,117 ft.

Magnolia Pet. Co. No. 2 Kincaid, 330 ft. S and E lines, Sur. 36. Sd. 1,810-22 ft.; tested gas; P.B. 1,322 ft.; drlg. plugs.

Rainer Oil Co. No. 1 Hagist, 330 ft. S and W lines, SW¼, SE¼, Sur. 25. Loc.

V. G. Schimmell No. 3 Two Rivers ranch, 330 ft. S and W lines, Sur. 58. Drlg. 1,057 ft.

Swearingen & White No. 1 Lark Est., 152 ft. W line, 165 ft. S line tr., Scrugham Sur. Loc.

Nueces County

O. W. Killam No. 1 Carter, 330 ft. N and W lines, Carter tr., Wright Subd. T.D. 5,800 ft.; D.&A.

O. W. Killam No. 1 Ellick, 330 ft. N and E lines tr., sec. 109, Paul Subd. Drlg. 2,847 ft.

Terminal Oil Prod. Co. No. 1 Thurman, 660 ft. N and W lines, SW¼, sec. 10. Drk.

G. M. Richardson No. 1 Gerhardt, 660 ft. E line, 330 ft. N line, sec. 79. Drk.

Santa Clara Oil Co. (Atkins & O'Neil) No. 1 Cooke, 990 ft. N line, 330 ft. W line, sec. 14. T.D. 6,006 ft.; D.&A.

Southern Minerals Corp. No. 2 Rand Morgan, 330 ft. N line, midway E and W lines, Lot 42, Roberts Subd., A.B.&M. Sur. 411. Drk.

San Patricio County

Benedum & Trees Oil Co. No. 1 Jones, 1,650 ft. E line, 990 ft. S line, NW¼ sec. 65. Drlg. 5,873 ft.

Benedum & Trees Oil Co. No. 2 Welder, sec. 19. T.D. 6,116 ft.; P.B. 5,600 ft.; drlg. in.

C. B. Bunte No. 1 Mayfield, 121 ft. W line, 337 ft. N line, Tr. 11, Ross Subd. M.I.M.

Potrero Oil Co. No. 1 Welder, 2,000 ft. N and W lines, sec. 37. Cg. 5,737 ft.

Willis Storm No. 1 Nancy Hobbs, 622 ft. NW and SW lines, 30-ac. tr. Drlg. 6,-772 ft.

Starr County

J. F. Anderson No. 1 Ysagierre, Tr. 1, Porc. 79, J. of Camargo. Drlg. 387 ft.

Coreta Oil Co. No. 1 Pena, 150 ft. S and E lines, Sh. 80, Porc. 81. Drlg. 1,249 ft.

O. W. Killam No. 1 Sanford Ricaby, 330 ft. W line, Porc. 33, J. of Camargo, 300 ft. S of Highway 4. R.U.

Kingwood Oil Co. No. 1 Guerra & Son, 330 ft. NE line, 405 ft. SE line, Blk. 35, Porc. 56. No report.

Larkin & Warr No. 1 Kelsey-Bass, 533 ft. N line, 408 ft. E line, Lot 3, Porc. 87. R.U.

Ed Leach No. 1 Wood Est., 300 ft. W line E 3/7 Porc. 84. Cg. sh. 2,147 ft.

Porter Evans et al No. 1 Starr County Cattle Co., cen. Lot 14, Sh. 60, Porc. 89, J. of Camargo. Loc.

Willacy County

M. E. Morton et al No. 1 Santa Rosa, 330 ft. N and E lines, Lot 12, Blk. 31, Santa Rosa Subd., Sh. 44. Loc.

Shell Pet. Corp. No. 1 Yturria Land & Cattle Co., 990 ft. S and E lines, Share 64, San Juan de Carricitos grant. Drlg. 3,726 ft.

Wilson County

A. G. Reimenschneider No. 2 L. Harrell, 750 ft. NE line, 2,300 ft. NW line, Barrera Sur. No report.

Zapata County

Oklahoma Co. No. 1 Sanches, Sh. 9, Blk. 37, Sanchez ranch. Set sur. csg.; drlg. 1,550 ft.

O. J. Perren No. 1 Uribe, 330 ft. NE line, 227 ft. SE line, Blk. 31, Borrego grant. R.U.

Zavalla County

Bay Oil Co. No. 1 Calliant, sec. 43, A. B.&M. Sur. Drlg. 800 ft.

W. L. Bridges No. 1 Price & Flowers, 1,-320 ft. N and W lines, Blk. 1, sec. 19. Drlg. 407 ft.

Frank Buttram No. 1 Whitecotton, 2,400 ft. N line, 300 ft. W line, A.B.&M. Sur. Cg. 3,896 ft.

Leona Oil Co. and Witherspoon Oil Co. No. 1 West, 330 ft. E line, midway N and S lines, sec. 1, Bustillo Sur. Drlg. 4,513 ft.

S. W. TEXAS PROVEN

Caesar—Bee County

Sun Oil Co. No. 2 Borrown, 810 ft. E line, 1,500 ft. N line tr., G. Baker Sur. Comp.; 104.78 B.P.D. jetting; T.D. 3,-118 ft.

Dirks—Bee County

Dirks Bros. & McMurray No. 1 Harris, 200 ft. N line, 330 ft. W line, 61.9-ac. tr., Dugat Sur. Sd. 3,851-92 ft.; comp.; no gauge.

Dirks Bros. and McMurray No. 2-B Harris, 200 ft. N line, 990 ft. W line, 61.9-ac. tr., J. L. Dugat Sur. Drlg. 915 ft.

Illinois Pet. Co. No. 12-B Hall, Butler Sur. M.I.M.

Sun Oil Co. No. 7 Page, 990 ft. SE and SW lines tr., Young Sur. M.I.R.

Texas Co. No. 16 Young, 1,980 ft. NE of No. 9, T. J. Butler Sur. Drlg. 520 ft.

Petlus—Bee County

United Prod. Co. No. 53 Ray, Thos. Hanson Sur., Abst. 172. Sd. 3,934-35 ft.; W.O.C.

Ray—Bee County

N. V. Duncan No. 3-A Campbell, B.&B. Sur., Abst. 139. R.U.

Alta Verde—Brooks County

Nordan, Morris & Nash No. 1 Singer, 495 ft. E line, 835 ft. S line, Sur. 312. Set csg. 40 ft.; W.O.C.

Pedernal Oil Co. No. 1 Singer, 330 ft. S line, 330 ft. W line, NW¼, SW¼, Sur. 436. Drlg. 823 ft.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 1 Hickman, G. Hinds Sur. Drlg. 2,116 ft.

Driscoll—Duval County

Continental Oil Co. No. 9-A Sevier, Sur. 23. R.U.

Government Wells—Duval County

J. T. Stover No. 1 Hester, 330 ft. S and E lines, SW¼, NE¼, Sur. 47. Spudded.

Hagist—Duval County

Marzo Oil Co. No. 3 Hagist, 660 ft. SW of No. 1, Sur. 6. Drlg. 1,320 ft.

Hoffman—Duval County

Duval Oil Corp. No. 1 Hoffman, 990 ft. N line, 330 ft. NE line tr., Sur. 118. Drlg. 121 ft.

Duval Oil Corp. No. 2 Ruiz, 330 ft. S line, 990 ft. W line, sec. 119. Drlg. 2,015 ft.

W. D. Maston No. 1 Ruiz, Sur. 128. Set sur. csg.; W.O.C.

Plymouth Oil Co. No. 1-B Hoffman, 100-ac. tr., Sur. 118. Set csg. 950 ft.; W.O.C.

Standard Oil Co. of Kans. No. 2 Hoffman, 80-ac. tr., Sur. 118. Comp.; T.D. 2,874 ft.

Standard of Kansas No. 3 Hoffman, 80-ac. tr., Sur. 118. Drlg. 1,835 ft.

Sun Oil Co. No. 1 Sutherland, Sur. 62 Set csg. 60 ft.; W.O.C.

Labbe—Duval County

Stanolind O. & G. Co. No. 4 Farmers Life Ins., Sur. 416. M.I.M.

Loma Novia—Duval County

Bridwell Oil Co. No. 9 B.C.C., 990 ft. S and W lines, SE¼, Sur. 76. Comp.; no gauge; sd. 2,687-2,710 ft.

Bridwell Oil Co. No. 14 B.C.C., Sur. 76. Sd. 2,592-2,616 ft.; comp.; no gauge.

Bridwell Oil Co. No. 15 B.C.C., Sur. 76. T.D. 2,670 ft.; comp.; no gauge.

Bridwell Oil Co. No. 16 B.C.C., Sur. 76. Sd. 2,653-72 ft.; comp.; no gauge.

Bridwell Oil Co. No. 3-A Hubbard, sec. 71. Skidding on.

Bridwell Oil Co. No. 6-B Hubbard, Sur. 75. Drlg. 2,025 ft.

Bridwell Oil Co. No. 7-B Hubbard, 330 ft. S and W lines, N½, NE¼, Sur. 75. Sd. 2,620-38 ft.; comp.; no gauge.

Bridwell Oil Co. No. 8-B Hubbard, Sur. 75. Set csg. on sd.; W.O.C.

Bridwell Oil Co. No. 9-C Hubbard, Sur. 75. Skidding on.

Duval Oil Corp. No. 22 B.C.C., 660 ft. W of No. 21, 660 ft. S of No. 20, Sur. 59. Comp.; 10 B.P.H.; sd. 2,536-49 ft.

Duval Oil Corp. No. 23 B.C.C., Sur. 59. Set csg. on sd.; W.O.C.

Highland Oil Co. No. 10 Hubbard, W 320-ac. tr., sec. 72. T.D. 2,734 ft.; sd.; testing.

Highland Oil Co. No. 1-B Hubbard, Sur. 72. Comp.; 60 B.P.H.; open tbg.; T.D. 2,726 ft.

Humble O. & R. Co. No. 12-A Hubbard, Sur. 34. Set csg. 2,833 ft.; W.O.C.

Humble O. & R. Co. No. 35-B Hubbard, Sur. 72. Drlg. 1,308 ft.

Humble O. & R. Co. No. 61-B Hubbard, W½, Sur. 33. T.D. 2,780 ft.; ran tbg. and rods.

Humble O. & R. Co. No. 44-C Hubbard, E½, Sur. 72. Comp.; 35.16 B.P.H.; T.D. 2,728 ft.

Humble O. & R. Co. No. 11 Ruiz, Sur. 553. S.D. for repairs 2,290 ft.

Humble O. & R. Co. No. 11 Vela, N½, Sur. 42. T.D. 2,776 ft.; comp.; 19.3 B.P.H. on ½-in. choke.

Kaffie Lbr. Co. No. 1 Davidson, NW¼, Sur. 114. Drlg. 2,513 ft.

Magnolia Pet. Co. No. 29 Hahl, Sur. 67. T.D. 2,650 ft.; comp.; 15 B.P.H. on ½-in. choke.

Magnolia Pet. Co. No. 31 Hahl, Sur. 67. Comp.; 25 B.P.H. on ½-in. choke; T.D. 2,593 ft.

Magnolia Pet. Co. No. 32 Hahl, sec. 67. W.O.C. 2,627 ft.

Reynosa Oil Co. No. 3-A Davidson, NE¼, Sur. 114. R.U.

Rosan Oil Co. and Texla No. 11 Hubbard, Sur. 84. Drlg. 2,634 ft.

Shell Pet. Corp. No. 22 Hubbard, Sur. 77. Drlg. sd. 515 ft.

Shell Pet. Corp. No. 5 Mendoza, Sur. 68. T.D. 2,730 ft.; comp.; 15,000,000 ft. gas.

Shell Pet. Corp. No. 7 Mendoza, Sur. 68. Set csg. 2,729 ft.; W.O.C.

Sun Oil Co. No. 4 Hubbard, 990 ft. N line, 330 ft. W line, 336-ac. tr., sec. 83. Loc.

Texas Co. No. 13 B.C.C., Sur. 59. Sd. 3,-426-47 ft.; testing.

Texas Co. No. 28 Wendt, Sur. 68. Comp.; 5 B.P.H.; T.D. 2,734 ft.

Texas Co. No. 34 Wendt, Sur. 68. Comp.; 16 B.P.H. on ½-in. choke; T.D. 2,694 ft.

Texas Co. No. 35 Wendt, Sur. 68. Comp.; est. 15 B.P.H.; T.D. 2,771 ft.

Texas Co. No. 36 Wendt, Sur. 68. Drlg. 1,900 ft.

Texas Co. No. 37 Wendt, Sur. 68. Drlg. 2,127 ft.

Valley Osage Oil Co. No. 4 Hubbard, Sur. 75. Sd. 2,611-16 ft.; set csg.; W.O.C.

Loma Vista—Duval County

Shell Pet. Corp. No. 1-A Welder, 330 ft. N line, 900 ft. W line lse., Sur. 103. Cg. 2,138 ft.

Piedra Lumbre—Duval County

Humble O. & R. Co. No. 1-B D.C.R.C., 330 ft. N and W lines, N½, NE¼, Sur. 95. T.D. 1,980 ft.; comp.; no gauge.

Humble O. & R. Co. No. 2-B D.C.R.C., N½, NE¼, Sur. 95. M.I.M.

Magnolia Pet. Co. No. 3 D.C.R.C., Sur. 95. Sd. 1,969-79 ft.; gas blew out; flowing wild.

Texas Co. No. 16 D.C.R.C., SW¼, Sur. 100. T.D. 1,976 ft.; comp.; 22 B.P.H.

Texas Co. No. 17 D.C.R.C., SW¼, Sur. 100. M.I.M.

Seven Sisters—Duval County

Atlantic Oil Prod. Co. No. 9-D Welder, 2,970 ft. E line, 330 ft. N line, Sur. 113. Sd. 2,462-77 ft.; completing.

Atlantic Oil Prod. Co. No. 10-D Welder, Sur. 113. Set csg. 2,206 ft.; W.O.C.

Buchanan & Blanco Oil Co. No. 2-B Welder, 330 ft. S and W lines, S½, NW¼, Sur. 591. Sd. 2,494-2,503 ft.; comp. in pits est. 15 B.P.H. fluid.

Buchanan & Blanco Oil Co. No. 3-B Welder, 990 ft. W line, 330 ft. N line, S½, NW¼, Sur. 591. Drlg. 2,117 ft.

S. B. Cloyes No. 1 Serna, 330 ft. N and E lines tr., Sur. 384. Loc.

Diamond Half Oil Co. No. 4 Serna, Sur. 384. Sd. 2,404-10 ft.; comp.; 26 B.P.H. on ¼-in. choke.

Dulce Oil Co. No. 2-B Serna, Sur. 384. Skidding on.

Humble O. & R. Co. No. 11-A Serna, Sur. 384. Comp.; 35.84 B.P.H. on ½-in. choke; T.D. 2,475 ft.

Humble O. & R. Co. No. 12-A Serna, SW¼, Sur. 384. Set csg. 2,481 ft.; W.O.C.

Humble O. & R. Co. No. 7-B Serna, SE¼, Sur. 384. Comp.; 16.54 B.P.H. on ¼-in. choke; T.D. 2,494 ft.

Humble O. & R. Co. No. 8-B Serna, Sur. 384. Set csg. 60 ft.; W.O.C.

Humble O. & R. Co. No. 9 Smith, Sur. 382. T.D. 2,445 ft.; comp.; 13.78 B.P.H. on ½-in. choke.

Humble O. & R. Co. No. 3 Wright, 330 ft. S and W lines, SW¼, Sur. 113. T.D. 2,-528 ft.; oil sd.; swbg. in.

Navarro Oil Co. No. 2 Welder, 330 ft. S and E lines tr., Sur. 383. Sd. 2,440-62 ft.; comp.; 35 B.P.H. on ½-in. choke.

Parr Oil Co. No. 3 Welder, Sur. 383. Drlg. 2,257 ft.

Reliance & Kleiner No. 5 Welder, 1,649 ft. N line, 1,622 ft. E line, Sur. 381. Sd. 2,409-22 ft.; comp.; 35 B.P.H. on ½-in. choke.

Reliance & Kleiner No. 6 Welder, Sur. 381. Set csg. 2,397 ft.; W.O.C.

Reliance Oil & Roy. Co. and Henderson & Harvey No. 1 Drummond, 330 ft. S and E lines, Sur. 398. R.U.

Reliance Oil & Royalty Co. No. 2-A Telford, Sur. 386. Swbg. wtr., little oil; T.D.

Santa Clara Oil Co. (Atkins & O'Neil) No. 31 Welder, NE 160-ac. tr., Sur. 383. Sd. 2,447-63 ft.; comp.; 25.13 B.P.H. on ¼-in. choke.

Santa Clara Oil Co. (Atkins & O'Neil) No. 32 Welder, Sur. 383. Drlg. 1,920 ft.

Santa Clara Oil Co. No. 5-B Welder, Comp.; 32 B.P.H. on ⅜-in. choke; sd. 2,466-81 ft.

Santa Clara Oil Co. (Atkins & O'Neil) No. 7-B Welder, Sur. 383. Sd. 2,453-74 ft.; set csg. 2,453 ft.; W.O.C.

Santa Clara Oil Co. (Atkins & O'Neil) No. 3-C Welder, Sur. 381. Sd. 2,423-37 ft.; comp.; 20.02 B.P.H. on ¼-in. choke; T.D. 2,437 ft.

Shell Pet. Corp. No. 7-A Welder, Sur. 385. Drlg. 1,365 ft.

Westheimer & Daube No. 9 Campos, Sur. 224. Sd. 2,199-2,218 ft.; set csg.; W.O.C.

Pearsall—Frio County

Amerada Pet. Corp. No. 1 Correy & McWilliams, 660 ft. N line, 721 ft. W line, Tr. 17, Manuel Tijerina Sur. No. 300. T.D. 5,676 ft.; prep. to acidize.

Amerada Pet. Corp. No. 1 Correy & McWilliams, 660 ft. S line, 728 ft. E line Tr. 6, Jose Arocha Sur. 298. Comp. 656 bbls. in 7 hrs. on ¾-in. choke; T.D. 5,565 ft.

Amerada Pet. Corp. No. 7 Haiff & Oppenheimer, 1,320 ft. W line, 330 ft. S line, J. H. Gibson Sur. No. 16. Stdg. 3,926 ft.

Amerada Pet. Corp. No. 2 Smith, 466 ft. E line, 2,771 ft. N line tr., J. V. Mason Sur. Drlg. 1,815 ft.

Combs & Oakes No. 1 Arp, 330 ft. S and E lines, 102-ac. tr., S. Blair Sur. 297. R.U.

Gillette—Goliad County

Jane Oil Co. No. 1-C Gillette, J. Gomez Sur. Sd. 3,660-68 ft.; set csg.; W.O.C.

North Poitus—Goliad County

Magnolia Pet. Co. No. 6 Scarborough, 600 ft. S of No. 4, Talley Sur. T.D. 3,616 ft.; comp.; 19 B.P.D.; T.P. 160 lbs.; C.P. 350 lbs.

Clark—Guadalupe County

Eickenroht & Gallagher No. 1 Johns, 130 ft. E line, 450 ft. N line, 840-ac. tr., DeWitt Sur. 13. Drlg. 2,847 ft.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No 1 Farm, Tr. 2,309, Blk. 59. Swbg. 7,540-49 ft.; S.G.

Union Sulphur Co. No. 8 American Rio Grande L. & I. Co., 660 ft. N & E lines, Tr. 2,120, Blk. 87. Cg. sh. 7,702 ft.

Union Sulphur Co. No. 9 American Rio Grande L. & I. Co., Farm Tr. 2,275, Blk. 59. Drlg. sh. and L. 6,327 ft.

Samfordyce—Hidalgo County

J. H. Anderson No. 4 Guerra, Tr. 254, Porc. 40. Sd. 2,472-56 ft.; comp.; 4 B. P.H. on ¼-in. choke.

J. H. Anderson No. 5 Guerra, Tr. 254, Porc. 40. R.U.

J. T. Barlow No. 1 Maria Flores de Chapa, 230 ft. W line, 692 ft. S line, Tr. 250, Porc. 39. Sd. 2,951.5-55 ft.; sprayed oil through 1/16-in. choke; T.P. 1,200 lbs.; shut in: W.O. orders.

Dean Bros. No. 1 Lula George, 150 ft. S line, 230 ft. W line, 10-ac. tract. Tract 13, Porc. 40. Sd. 2,748-52 ft.; W.O.C.

Henshaw Bros. No. 1 Seabury, Tr. 256, Porc. 58. Sd. 2,759-71 ft.; comp.; gasser; no gauge.

Weekly Oil Corp. No. 1 George, Tr. 13, Porc. 41. Set sur. csg. 202 ft.; W.O.C.

Bentonville—Jim Wells County

Texon and Lucey No. 1 Dodd, 330 ft. S and E lines, sec. 15, R. King Farm Lots Subd. M.I.M.

Sandia—Jim Wells County

J. E. Walsh No. 2 Wade, Lot 2, Blk. "C," Bode Subd. T.D. 1,500 ft.; S.D. for fuel.

San Diego—Jim Wells County

Houston Oil Co. No. 1 Hawkins & Wallace, 990 ft. S and E lines, Blk. 11. Cg. in sdtkd. hole 6,307 ft.

Loma Alta—McMullen County

V. G. Schimmel No. 1 Hagist, 330 ft. N and E lines, SW¼, Sur. 102, R.U.

Lucas—Live Oak County

Houston Oil Co. No. 24 Cartwright, 1,-033 ft. N of No. 22. T.D. 500 ft.; blew out; stdg.

King—Nueces County

La Jita Oil Corp. No. 2 King, 660 ft. N and W lines, sec. 24. Cg. 5,417 ft.

Saxet Heights—Nueces County

Bartlett & Reed No. 1 Carson, SW cor., 20-ac. tr., Villareal Sur. Set csg. 4,126 ft.; perf. 4,078-84 ft.; rng. tbg.

Capitol Oils, Inc., No. 1 L. Ayres, cen. 5-ac. tr., Villareal Sur. Sd. 4,069-80 ft.; flowing in pits; no gauge.

Cherokee Oil Co. No. 1 Cowles-Jenkins, Villareal Sur. Perf. 4,075-79 ft.; C.O.

Cherokee Oil Co. No. 1 Holder, 5-ac. tr., Villareal Sur. R.U.

Cherokee Oil Co. No. 1 Werner, Villareal Sur. Perf. 4,075-79 ft.; C.O.

Conroe Drlg. Co. No. 3 McBride, 660 ft. W of No. 2. Perf. 4,097½-99 ft.; comp.; no gauge.

J. K. Culton No. 5 Baldwin, Blk. 20, Russell Farm Lots. Sd. 4,076-96 ft.; set csg.; W.O.C.

J. K. Culton No. 6 Whelan, 82.38-ac. tr., Villareal Sur. Drlg. 2,534 ft.

Erin Oil Co. No. 1 Spiller, cen. 1.6-ac. tr., Ellendale Gardens No. 3. Sd. 4,072-76 ft.; comp.; 400 B.P.D.

Tom Graham No. 1 City of Corpus Christi, C 5-ac. tr., Villareal Sur. Cg. 4,062 ft.

Tom Graham No. 1 Kaiser, Villareal Sur. T.D. 4,077 ft.; rng. tbg.

Graham & Roberts No. 1 Curry, Villareal Sur. Sd. 4,050-65 ft.; brought in as gasser; reworking.

D. H. Hawn No. 2 Skipper, Villareal Sur. Set csg. on sd. 4,070-80 ft.; comp.

Johnson et al No. 1 Cowles, 150 ft. W line, 75 ft. S line tr. T.D. 3,500 ft.; fsg.

Johnston et al No. 1 Werner, Blks. 11, 12, Ellendale Gardens No. 1. Drlg. 2,-193 ft.

Port O. & G. Co. No. 1 Country Club, C Lot 20, Villareal Sur. Drlg. 4,034 ft.

W. A. Richardson No. 2 Edwards, 10-ac. tr., Villareal Sur. Drlg.

Richardson Pet. Co. No. 1 Poth, C 4-ac. tr., Villareal Sur. Top sd. 4,026 ft.; flowing in pits; T.D. 4,077 ft.

Hiram Reed No. 1 Quinn, Villareal Sur. Drlg. 2,317 ft.

J. B. Salmon No. 1 Clark, Blk. 4, Oaklawn Subd. Testing 4,076 ft.

W. F. Stone No. 1-B Schliecher, Blk. 13, Ellendale Gardens No. 2. Set csg. 4,-089 ft.; W.O.C.

Taylor Ref. Co. No. 1 Corpus Christi Golf and Country Club, 83-ac. tr., Villareal Sur. Drlg. 3,447 ft.

Taylor Ref. Co. No. 2 Corpus Christi Golf Club, 83-ac. tr. Drk.

Taylor Ref. Co. No. 4 Corpus Christi Golf Club, 83-ac. tr. Comp.; no gauge; T.D. 4,079 ft.

Taylor Ref. Co. No. 3 Saunders, Villareal Sur. Set csg. 4,075 ft.; C.O.

Westgate Oil Co. No. 3 Sturm Est., 89-ac. tr., Villareal Sur. Sd. 4,072-82 ft.; comp.; 5 B.P.H.

Westgate Oil Co. No. 6 Sturm Est., Villareal Sur. Skidding on.

Saxet—Nueces County

Conroe Drlg. Co. No. 1 Frank Bliss, W 80-ac. tr., J. W. Stevens Sur. No. 406. Drlg. 992 ft.

Tom Graham No. 2 Flato, Blk. 30, P.B. 4,342 ft.; cmtd. perforations 4,322-32 ft.; W.O.C.

Great States Oil Co. No. 1 Smith, 330 ft. W line, 125 ft. N line, 11-ac. tr. M.I.M.

W. B. Hinton No. 1 E. B. Cole, 60-ac. tr., Villareal Sur. Spudded in.

A. F. Holliday No. 2 Griffith, 347 ft. W of No. 1, G. Frank Sur. 416. Drlg. 2,-562 ft.

A. F. Holliday No. 3 Hutchins, sec. 30. Set csg. 1,000 ft.; W.O.C.

Houston Oil Co. No. 11 Rand Morgan, sec. 7, Rnge. 5. Spudded.

Morgan Gulf Oil Co. and Great States Oil Co. No. 1 Humphreys, 330 ft. S line, 990 ft. W line, Stevens Sur. 406. Set csg. 508 ft.; W.O.C.

Morgan Gulf Oil Co. and Great States No. 1-B Rand Morgan, B.S.&F. Sur. 404. R.U.

Morgan Gulf Oil Co. No. 2 Rand Morgan, 990 ft. N and E lines, Sur. 403. T.D. 5,844 ft.; rng. csg.

Renwar Oil Co. and Maryland Corp. No. 1 Manatt, cen. Blk. 5, Clarkwood townsite. Sd. 4,409-24 ft.; comp.; 24 B.P.H. on ¼-in. choke.

Renwar Oil Co. No. 1 Morgan, sec. 315. Drlg. 2,565 ft.

W. A. Richardson No. 1 Smith, C Blk. 4, Clarkewood townsite. Spudded in.

W. A. Richardson No. 3 Meredith, Lot 11, Clarkwood townsite. Drlg. 3,650 ft.

Richardson et al No. 3 Sedwick, Sur. 586. Drlg. 4,027 ft.

Southern Minerals Corp. No. 4 Bliss, Sur. 406. Spudding.

Southern Minerals Corp. No. 2 Isensee, C. Land Sur. 404. Flowing in pits, 4,400 ft.

Southern Minerals Corp. No. 4 Isensee, SE cor. 235-ac. tr., C. Land Sur. 404. Drlg. 4,133 ft.

Southern Minerals Corp. No. 1 Mastin, G. Frank Sur. 416. Drlg. 5,720 ft.

Southern Minerals Corp. No. 4 Smith, Blk. 14. Set csg. 4,852 ft.; W.O.C.

Texon Royalty Co. No. 1 Lingnau, 13.44-ac. tr., C. Land Sur. 404. Sd. 4,432-39 ft.; W.O.C.

Texon Royalty Co. No. 1 McElroy, 115 ft. N line, 100 ft. W line, 40-ac. tr., Gallagher Sur. Drlg. 3,515 ft.

Plymouth—San Patricio County

Humble O. & R. Co. No. 1 Bevly, 466 ft. N and W lines tr., Blk. 8, sec. 35, Taft Sub. T.D. 5,640 ft.; oil sd.; S.D. for repairs.

Magnolia Pet. Co. No. 7 Corpus Christi Bank, 932 ft. E of No. 6, sec. 24. Drlg. 4,660 ft.

Plymouth Oil Co. No. 43-C Welder, 2,046 ft. S line, 2,355 ft. W line, sec. 49. Drlg. plugs 5,633½ ft.

Plymouth Oil Co. No. 44-C Welder, 5,256 ft. S line, 1,312 ft. E line, sec. 71. T.D. 5,649 ft.; W.O.C.

Plymouth Oil Co. No. 45-C Welder, 1,128 ft. S line, 2,522 ft. W line, sec. 49. Drlg. 5,515 ft.

Plymouth Oil Co. No. 46-C Welder, 659 ft. S line, 1,507 ft. S line, sec. 49. Drlg. hd. L. 4,794 ft.

Plymouth Oil Co. No. 47-C Welder, 2,187 ft. S line, 1,423 ft. W line, sec. 49. Drk.

Sun Oil Co. No. 4 Hunt, 466 ft. S and W lines, 154.39-ac. tr. T.D. 5,645 ft.; drlg. plugs.

Texon Roy. Co. No. 1 Rambo, 330 ft. W line, 466 ft. N line, Lot 6, sec. 35, D.S.T. 5,643-53 ft.; 4 fourbles P.L.O.; set csg.; W.O.C.

Taft Field—San Patricio County

Humble O. & R. Co. No. 1 Godwin, 330 ft. S and W lines, sec. 23, Taft, Farm Lands, Third Addn. T.D. 4,010 ft.; resetting screen and lnr.

Humble O. & R. Co. No. 2 Mayo, 1,323 ft. S line, 1,152 ft. E line tr., Tabor Sur. Drk.

Shell Pet. Corp. No. 1 Pullin, Blk. 4, sec. 1. T.D. 4,915 ft.; swbg. in; closed in C.P. 240 lbs.

Margo—Starr County

H. L. Curry No. 1 Garcia, 30-ac. tr., Sh. 7-H, Porc. 70, J. of Mier. Drlg. 675 ft.

St. Marys O. & G. Co. No. 1 O'Shea, 450 ft. N line, 935 ft. W line, Sh. 65, Porc. 71. Drlg. 676 ft.

Rio Grande City—Starr County

Foch Oil Co. No. 8 Doyno, 495 ft. N line, 528 ft. W line, Blk. 4, Sh. 77-A, Porc. 81. Sd. 1,440-46 ft.; comp.; 30 B.P.D. on pump.

Samfordyce—Starr County

E. A. Graham No. 1 Santos Villareal, 26.48-ac. tr., Tr. 250, Porc. 38. Cg. 2,-827 ft.

Phillips and Barnsdall Oil Co. No. 9 Yturria L. & L. Co., 700 ft. W line, 1,-710 ft. S line tr., E½, Porc. 100. Sd. 2,790-96 ft.; comp.; 3 B.P.H. on ½-in. choke.

Phillips and Barnsdall No. 10 Yturria Land & Cattle Co., 110-ac. tr., E½, Porc. 100. R.U.

Porter & Grimes No. 2 Garcia Land & Livestock Co., Lot 1, W½, Porc. 100. M.I.M.

Skelly Oil Co. No. 12 Seabury, 10-ac. tr., Tr. 256, Porc. 38. Spudded.

Sun Oil Co. No. 2 Chapatola, Porc. 99. Cg. 2,790 ft.

Aviator—Webb County

Five Spot Drlg. Co. No. 1 Bruni, Blk. 44, Albercas grant. Sd. 1,677-80 ft.; testing.

Cole—Webb County

Cole Pet. Co. No. 97 Benavides, Blk. 3, sec. 7. Cg. 2,937 ft.

Lopez—Webb County

Hunter Co. No. 7 Billings, 2,310 ft. N and E lines, Sur. 113. Sd. 2,182-2,209 ft.; comp.; 25,000,000 ft. gas per day.

Hunter Oil Co. No. 1-A Billings, Sur. 113. R.U.

C. H. Lewis No. 6 Lopez, sec. 110. M.I.M.

Mills Bennett Prod. Co. No. 9 A. S. Billings, 975 ft. N line, 330 ft. E line, sec. 113. T.D. 2,159 ft.; comp.; 15 B.P.H.

Mills Bennett Prod. Co. No. 6 Garcia, Sur. 113. Testing 2,193 ft.

Mills Bennett Prod. Co. No. 10 Garcia, Sur. 113. Comp.; 22 B.P.H.; T.D. 2,193 ft.

Mills Bennett Prod. Co. No. 3 Montemayer, 2,310 ft. W line, 2,042 ft. N line, Sur. 114. Drlg. 1,832 ft.

Mills Bennett Prod. Co. No. 10-A Billings, Sur. 113. Testing 2,150 ft.

Mortimer & Springer No. 8 M. Lopez, sec. 114. M.I.M.

Mortimer & Springer No. 4 Paula Vela, Sur. 114. Sd. 2,195-2,212 ft.; comp.; 15 B.P.H.

Mortimer & Springer No. 10 Maria Lopez, Sur. 112, 660 ft. N of No. 9. Sd. 2,221-38 ft.; comp.; 15 B.P.H.

Superior Oil Co. No. 7 W. C. Billings, Sur. 109. Cg. sd. 2,227 ft.

Superior Oil Co. No. 6-A Billings, Sur. 113. Sd. 2,182-98 ft.; comp.; 10 B.P.H.; T.D. 2,210 ft.

Superior Oil Co. No. 7-A Billings, Sur. 113. Sd. 2,207-35 ft.; swbg.

O'Hern—Webb County

Magnolia Pet. Co. No. 5 J. Benavides, Blk. 360. T.D. 2,562 ft.; comp.; 11 B. P.H.; 5/16-in. choke.

Magnolia Pet. Co. No. 6 J. Benavides, Blk. 389. Set csg. 2,873 ft.; W.O.C.

Magnolia Pet. Co. No. 11 Seacord-Benavides, Blk. 359. Comp.; 11 B.P.H.; 5/16-in. choke; T.D. 2,556 ft.

Magnolia Pet. Co. No. 12 Seacord-Benavides, Blk. 390. Rng. csg. 2,565 ft.

J. J. O'Hern No. 1 S. Benavides, Blk. 460. Loc.

Otis Phillips No. 2 Benavides, Blk. 295. Drlg. 1,517 ft.

T. S. Reed No. 2 Brennan-Benavides, Blk. 318. Comp.; 240 B.P.D.; sd. 2,183-98 ft.

Texia Oil Corp. No. 1 Benavides, Blk. 361. Sd. 2,353-87 ft.; W.O.C.

Escobas—Zapata County

B. W. Roscoe No. 4 Bustamante, Share 33. No report.

S.R.C. Oil Co. No. 16-A Trevino, 330 ft. S line, on line between Blks. 14 and 15, Sur. 66 . T.D. 1,280 ft.; comp. 30 B.P.D.

S.R.C. Oil Co. No. 17-A Trevino, Sur. 66. Drlg. 975 ft.

Texas Co. No. 88 Whitehead, Cerrito Blanco grant. Sd. 1,247-59 ft.; W.O.C.

Haynes—Zapata County

Clover O. & G. Co. No 12 Haynes, Blk. 7. Comp.; no gauge.

Clover O. & G. Co. No. 13 Haynes, Blk. 7. M.I.M.

WEST TEXAS WILDCATS

Andrews County

Grisham-Hunter Oil Corp. No. 1 Ratliff & Bedford, 1,320 ft. N and W, sec. 24, Blk. 73, P.S.L. Sur. Cellar.

Humble O. & R. Co. No. 1 J. M. Spinks, sec. 13, Blk. A-20. T.D. 4,550 ft., shot 420 qts. Acidized 4,000 gals.; flowed 362 bbls. in 24 hrs. on gas lift; to pump.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. S.D. 1,654 ft.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 E. B. Duggan, cen. Labour 13, League 55, Oldham County School Land. Drlg. 170 ft.

Concho County

Maverick Oil Co. No. 1 Jim Rice, sec. 18, I.N.R.R. Sur. T.D. 2,464 ft.; P.B. 1,850 ft.; shot 15 qts.; tested 7 bbls. oil per day.

W. C. Nelson et al No. 1 Rice, 1,980 ft. S and 660 ft. W, sec. 13, H.&T.C. Sur. Drlg. 950 ft.

Crane County

Clark et al No. 1 A. P. Jordan, sec. 12, Blk. B-22, P.S.L. Sur. Machine.

Gulf Oil Corp. No. 2 W. N. Waddell, 1,-980 ft. from S and W, sec. 18, Blk. B-21. Drlg. 1,000 ft.

Gulf O. Corp. No. 3 Tubbs, 440 ft. N and E, sec. 12, Blk. 27-B. Drlg. 258 ft.

Humble O. & R. Co. No. 2 Tubbs, sec. 11, Blk. B-27. Drlg. 3,132 ft.

Loffland Bros. No. 2 Tubbs, 2,200 ft. N and 440 ft. E, sec. 9, B-27. Derrick.

Moore Bros. No. 1 Barnsley, sec. 43, Blk. 32, P.S.L. Sur. Drlg. 3,747 ft.

Rider et al No. 1 Thaxton, 200 ft. from NE and 2,570 ft. from SE, sec. 2, W. L. Wilkenson Sur. Spudded and S.D.

Sinclair Prairie Oil Co. et al No. 1 T.-Bar, sec. 3, Blk. B-27. Drlg. 3,977 ft.

L. R. Stroud No. 1 Moseley. Drlg. 1,735 ft.

Crockett County

John I. Moore No. 1 A. C. Hoover, sec. 4, Blk. FF, B.&B. Sur. T.D. 735 ft.; lowering csg.

Ector County

W. Dunning, Jr., No. 1 H. E. Cummins, sec. 33, Blk. 45, Twp. 1n, T.&P. Sur. Drlg. 3,906 ft.

Grisham-Hunter Corp. No. 1 R. B. Cowden, C of SE¼, sec. 10, Blk. 45, Twp. 2n, T.&P. Sur. Cellar.

Edwards County

Paul Teas No. 1 J. B. Stewart, sec. 1, Blk. DA, G.C.&S.F. Sur. Drlg. 5,322 ft.

Fisher County

Forest Dev. Co. No. 1 A. M. Dry, sec. 108, Blk. 2, H.&T.C. Sur. Drlg. 2,663 ft.

Gaines County

Landreth Prod. Co. No. 1 Kirk, sec. 11, A-21. S.D. 2,735 ft.

Glasscock County

Fleetborn Oil Corp. No. 1 F. C. Dodson, sec. 13, Blk. 34, Twp. 3s, Fsg. 3,137 ft.

Bruce Frazier No. 1 E. Patterson, 330 ft. N and E, sec. 188, Blk. 29, W. & N.W. S.D. 25 ft. to R.U.

M. B. Stanton et al No. 1 W. P. Edwards, 1,650 ft. from S and E, sec. 11, Blk. 34, Twp. 2s, T.&R. Sur. R.U. spudder

Howard County

Southern Oil Co. No. 1 W.P. Edwards sec. 32, Blk. 30, Twp. 1s, T.&P. Sur. Drlg. 1,977 ft.

D. C. Reed et al No. 1 Walter Pike, 660 ft. from S and E, sec. 24, Blk. 33, Twp. 1n, T.&P. Sur. Drlg. 446 ft.

Hudspeth County

Haymon Krupp Oil & Land Co. No. 1 Thaxton, sec. 24, Blk. 74, Twp. 6, T.&P. Sur. T.D. 893 ft.; drlg. out 2 joints of csg.

Jeff Davis County

C. M. Joiner No. 1 Jones & Coffield, sec. 1, Blk. 3, H.&T.C. Sur. Drlg. 3,513 ft.

Jones County

Fain-McGaha Oil Corp. No. 1 Hayden, E. C. Martinez Sur. 195. T.D. 2,195 ft.; U.R. csg.

Gyr & Davis No. 1 Clyburn, 6,000 ft. from N and 850 ft. from E, H. Millard Sur., Sub. 27, R.U.

T. D. Humphrey No. 1 J. M. Radford, 1-sec. 19, Blk. 16, T.&P. Sur. Drlg. 1,736 ft.

Parker No. 1 C. L. Brown, sec. 9, Blk. 3, T.&N.O. Sur. S.D. 1,735 ft.

Martin County

Woodley Pet. Co. No. 1 M. S. King, sec. 30, Blk. 35, Twp. 3s, T.&P. Sur. Drlg. 3,568 ft.

Menard County

Wilcox O. & G. Co. No. 1 Merchenson, sec. 158, E.L.R.R. Sur., Abst. 1,840, 8 miles S of Menard. Drlg. 1,965 ft.

Pecos County

Dobbs Oil Co. No. 1 Rooney, sec. 12, Blk. 125, T.&St.L. Sur. Drlg. 930 ft.

S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. S.D. 232 ft.

Trans-Pecos Oil Co. No. 1 F. W. Popham, sec. 235, Blk. 11, G.H.&S.F. Sur. Drlg. 560 ft.

Presidio County

Linderman Bros. Oil Corp. No. 1 J. B. Bledsoe & Badgley, sec. 15, Blk. 161, G.C.&S.F. R.R. Co. Sur., 2½ mil. NE of Presidio. T.D. 1,635 ft.; trying to loosen pipe.

Reagan County

Bahan & Rhodes No. 1 M. Chase, 1,310 ft. from N and E, sec. 40, Blk. 36, Twp. 5s, T.&P. Sur. Drlg. 800 ft.

Schleicher County

Cardinal Oil Co. et al No. 1 J. A. Whitten, sec. 35, Blk. LL, T.C.R.R. Sur. U.R. at 1,370 ft.; drlg. 3,401 ft.

Magnus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, Blk. V-29, Elev. 2,209 ft.; S.G. 4,350 ft.; gas sd. 4,956-61 ft.; drlg. 5,381 ft.

Scurry County

Bristow & Cantrill No. 1 Shannon, Est., sec. 331, Blk. 97, H.&T.C. Sur. S.D. 2,505 ft.

Tom Green County

Spinner No. 1 Reed, Sub. 39, Mason & Perry Sur. S.D. 2,035 ft.

Ward County

Abell Brothers' No. 1 Lancaster Estate, sec. 61, Blk. 3, H.&G.N. Sur. In Penn

County, 5¼ miles down Pecos River from NW cor. of Pecos and E cor. of Reeves County. T.D. 2,425 ft.; C.O.

Gulf Oil Corp. No. 1 W. A. Estes, sec. 38, Blk. 34, H.&T.C. Sur. Drlg. 457 ft.

Lindsay & Boiln No. 1 Thomas, sec. 31, Blk. 34, H.&T.C. Sur. S.D. 2,320 ft.

Olsen & Anderson No. 1 Yell, W. F. Stewart Sur., sec. 6, T.D. 2,600 ft.; P.B. to 2,455 ft.; standardizing.

Peck et al No. 2 Reynolds, 330 ft. from SE and NE sec. 12, Blk. 32, H.&T.C. Sur. Loc.

Richardson Oils, Inc., No. 1 Hathaway, sec. 37, Blk. 34, H.&T.C. Sur. Drlg. 2,148 ft.

Superior Oil Co. No. 1 J. H. Hughes, sec. 67, Blk. 34, H.&T.C. Sur. T.D. 2,095 ft.; U.R. csg.

Winkler County

Bert Fields et al No. 1 Pure-Clapp, 330 ft. N and E, sec. 26, Blk. 26. Drlg. 2,764 ft.

Illinois Oil Co. No. 1 McCutchen, sec. 16, Blk. B-3. Cellar.

R. H. Henderson et al No. 1 J. B. Walton, sec. 10, Blk. 26. T.D. 3,045 ft.; swbg. and C.O.

R. H. Henderson No. 2-B Walton, 330 ft. from N and W, sec. 10, Blk. 26. T.D. 3,051 ft.; T.P. 3,012 ft.; to complete.

Herbert Oil Co. No. 1 I. Hendrick, 3,310 ft. from S and W, sec. 14, Blk. 26. T.D. 2,940 ft.; standardizing.

Humble O. & R. Co. No. 2-C Walton, sec. 34, Blk. 74, P.S.L. Sur. Drlg. 1,166 ft.

Illinois Oil Co. No. 1 Central State Bank of Abilene, sec. 23, Blk. 26, P.S.L. Sur. T.D. 3,116 ft.; to shoot.

Magnolia Pet. Co. No. 1 State-Walton, sec. 7, Blk. B-3. T.D. 3,695 ft.; P.B. 3,250 ft.; drlg. plug.

Fred Hyer No. 1 Evans, sec. 8, Blk. 56. T.D. 3,930 ft.; C.O. at 3,830 ft.

Joiner No. 1 Evans, sec. 46, Blk. 73, P.S.L. Sur. Fsg. 3,168 ft.

Read & Duffey No. 1 Sealey, 330 ft. from N and W, sec. 3, Blk. A, G.M.M.B.&A. Sur. Loc.

Superior O. & G. Co. of Tulsa No. 1 M. J. Hill, sec. 18, Blk. B-11, P.S.L. Sur. Drlg. 2,900 ft.

Wahlenmaier and Atlantic Oil Prod. Co. No. 1-A Walton, sec. 34, Blk. 74. T.D. 2,883 ft.

Yoakum County

Bahan et al No. 1 Henard, C SW ¼, sec. 267, Blk. D, J. H. Gibson Sur. Rotary.

Stogner et al No. 1 Roosevelt, 2,230 ft. from N and 330 ft. from E, sec. 215, Blk. D, John H. Gibson Sur. T.D. 140 ft. R.U. rotary.

E. C. TEXAS WILDCATS

Anderson County

Gulf Oil Corp No. 1 Ross, 1,770 ft. from SW and 1,370 ft. from NW of Robt. Irwin Sur. T.D. 5,476 ft.; elev. 487 ft.

Angelina County

G. E. Ginter No. 1 Martin Wagon Works, 150 ft. from N and 200 ft. from E. E. Evans Sur., 2 mi. W of Homer. S.D.

Bill La Rue No. 1 Cameron Lbr. Co., 2,700 ft. from most E E line and 400 ft. from S line of I. Ray Sur. Weches 1,178-1,201 ft.; drlg. 1,360 ft.

Bowie County

Woodley Pet. Co. No. 1 Lumpkin. S.D. 3,260 ft.

Cherokee County

Humble O. & R. Co. No. 1 S. D. Goodson, 800 ft. from N and 700 ft. from W, I. Reynolds Sur., 4 mi. SW of Jacksonville. Drlg. 880 ft.

Peveto et al No. 1 C. R. Kelley, 150 ft. out of NW cor. of Jose Pineda Sur., 3 mi. N of Jacksonville. Pecan 3,440-3,772 ft.; Austin 4,420 ft.; drlg. 3,825 ft.; elev. 585 ft.

Falls County

E. L. Chapman et al No. 1 S. Grocholski, 650 ft. from most EW line and 900 ft. from SS line of survey, in SE cor. of county. R.U.

Franklin County

Lucey Pet. Co. No. 19 W. Crawford, 1,048 ft. from N and 150 ft. from W line of O. James Sur. Drlg. 1,155 ft.

Freestone County

Clark & Cowden No. 1 M. Scott, Church Lot in Amalt Sur., 7 mi. N of Fairfield. S.D. 31 ft.

Grayson County

Olson Drlg. Co. No. 1 Southwestern Life Ins. Co., J. C. Jamison Sur., 6 miles NW of Denison. Elev. 767 ft. Top Viola 4,901 ft.; top Woodford 4,474 ft.; fsg. 5,930 ft.

P. A. Shaver No. 1 Wm. Blair, 900 ft. from S of survey and 10 ft. from Cook-Grayson County line, R. H. Deavers Sur., 1½ mi. SW of Tioga. S.D. 89 ft.

Henderson County

McDougal et al No. 1 E. Price, 965 ft. S and 660 ft. E of most westerly W line, M. Mathews Sur., 4 mi. S of Trinidad. Drlg.

Kaufman County

Scott & Woodside No. 1 Robinson, A. Cherino Sur., 800 ft. SW line and 500 ft. NW line, 80-ac. tr., 2 mi. W of Scurry. R.U.

Lamar County

J. Forrester et al No. 1 J. E. Woodward, L. Highton Sur., but in J. W. Woodward Sur., 1 mi. E of Mintel. Top Paluxy, 3,060 ft.; elev. 402 ft.; top anhydrite 3,735 ft.; S.D. 4,516 ft.

North Texas Synd. No. 1 Haynes & McCuistion, 600 ft. from S and 350 ft. from W line of A. W. Wright Sur., 4 mi. NE of Garrett Bluff. Fsg. 1,600 ft.

Limestone County

C. L. Lytle No. 1 J. L. Thompson, P. Varella Sur., Mexia field. S.D. 6,000 ft.

Nacogdoches County

Overtex Oil Co. No. 1 Hazelwood, J. L. Ewing Sur., 15 mi. S of Nacogdoches. S.D. 5,679 ft., Georgetown.

Red River County

Abercrombie-Harrison No. 1 Temple Lbr. Co., D. D. Bruton Sur., 10 mi. NE of Clarksville. So spud.

Midwest and Texhomia Oil Co. No. 1 Hacker & Hughes, M.E.&P. Sur., 9 mi. NE of Talco. S.D. 200 ft.

Williams et al No. 1 L. and O. Roberts, James Bankston Sur., 2 miles NE of Annona. Elev. 396 ft.; drlg. 730 ft.

Rusk County

McCallum et al No. 1 E. C. Gary, John Piburn Sur., 5 miles S of Henderson. Elev. 338 ft.; S.D. 3,750 ft.

Pure Oil Co. No. 1 W. H. Faulkner, Wm. Elliott Sur., S of Concord. Elev. 563 ft.; top Georgetown 3,450 ft. Drlg. 4,025 ft.

J. W. Shipman et al No. 1 Citizens Natl. Bank, NE cor. of 125-ac. tract, J. J. Y'Barbo Sur., 4 miles NE of Henderson. Fsg. 3,510 ft.

Titus County

Humble O. & R. Co. No. 1 M. B. Groves, Ben Jones Sur. Cut fault at 1,642 ft.; Top Woodbine 3,240 ft.; ran Schlumberger; no showing; S.D. 4,492 ft.; set 8⅝-in. csg.

Humble O. & R. Co. No. 1 M. Galt, R. Winn Sur. 1½, S.E. Talco; elevation 346 ft.; Georgetown 3,444-4,169 ft.; coring 4,334 ft.

Humble O. & R. Co. No. 2 Groves, B. Jones Sur. Elev. 352 ft.; drlg. 3,900 ft.

Magnolia No. 1 Carr, M. V. Delgado Sur. Elev. 371 ft.; drlg. 3,800 ft.

B. C. Morrison No. 1 L. Sanders, C of Lot 1, Blk. 30, Talco townsite. Drk.

N. C. TEXAS WILDCATS

Archer County

Continental Oil Co. No. 1 J. J. Perkins, Lot 47, Blk. 5, C.&P. Sur. Loc.

C. Crosby No. 1 Ray, Blk. 150, Harris Sub. S.D. 1,135 ft.

Deep Oil Dev. et al No. 1 Wilson, sec. 76, A.T.N.C. lands. W.O.C. 2,226-34 ft.

J. D. Hardegree No. 1 Gus Symank, Blk. 11, Meade Sur., L.&M. Subdvn. Drlg. 1,460 ft.

H. M. Kelleher No. 1 B. O. Watson, sec. 6, A. Nunley Sur. A-320. R.U.S.

Pace Pet. Co. No. 1 J. Dardek, T.E.&L. Sur. No. 1,582. Drlg. 1,208 ft.

Wilson-Ligon No. 1 M. B. Kolb, Blk. 116, Harris Subd. R.U. and S.D.

D. L. Wolf No. 1 J. W. Hasson, I.&G.N. Sur. A-239. Loc.

Baylor County

Consolidated Oil Co. No. 1 Portwood BB, T.E.&L. Sur. No. 1,572. O.S. 1,376-79 ft.; W.O.C.

K. R. March No. 1 W. B. Self, A. Hines A-156. Drlg. 1,182 ft.

Cooke County

Anderson & Kerr No. 1 C. A. Steizer, T. B. Stroud Sur. No. A-950. Drlg. 2,000 ft.

Anderson & Kerr No. 1 A. Wilson, Strong Sur. A-930. R.U.R.

Cain & Chandler No. 1 J. B. Burch, J. McWilliams Sur. A-658. R.U.R.

Joe Grazier No. 1 E. P. Bell, F. J. Lindheimer Sur. A-571. Loc.

Hardin Oil Co. No. 1 J. G. Bonner, J. Lindheimer Sur. Drlg. 2,150 ft.

B. H. Hilburn No. 1 Hugan, A. Myers Sur. No. A-646. Drlg. 30 ft.

Keil & Keil No. 1 J. J. Perkins, B.B.B.&C. Sur. A-164. Drlg. 150 ft.

Lanier et al No. 1 Thetford, S.P.R.R. Sur. A-987. Drlg. 1,305 ft.

L. A. Long et al No. 1 Sarles, Hunt County School Lands Sur. A-440. 5-in. 2,332 ft.; S.D.O.

Hank Masterson No. 1 R. J. Timms, J. W. McPherson Sur. A-696. Trace oil; drlg. 1,797 ft.

F. W. Merrick, Inc., No. 1 L. P. Bell, J. S. Martin Sur. A-699. Drk.

N. Newburn No. 1 Dotson, Wm. Campbell Sur. A-228. S.D. 1,543 ft., drill pipe.

Nixon Bros. No. 1 W. R. Harper, W. W. Pettit Sur. A-812. Loc.

Petroleum Producers No. 1 J. W. Mount, J. C. Meeks Sur. A-758. T.D. 1,650 ft.; P.B. and testing.

L. E. Rader No. 1 McCubbin, R. Wheelock Sur. A-1,684. Sand 1,556-66 ft.; fishing; pipe stuck.

E. R. Robison No. 1 J. Krebs, H. Wilkey Sur. A-1,090. Drk.

W. F. Russell No. 1 Belle Payne, Marshall University Sur. A-626. Drlg. 1,078 ft.

J. M. Russell et al No. 1 B. B. Bawley, Blk. 24, John Barnett Sur. Cleaning out 640 ft.

Seitz, Comegys & Seitz No. 1 Field & Bowers, L. Raney Sur. A-878. Location.

Sunray Oil Co. et al No. 1-A A. C. McCall, W. H. White Sur. A-1,134. Drlg. 4,600 ft.

B. F. Thompson No. 1 F. Trubenback, P. Davidson Sur. A-837. Drlg. 765 ft.

United Prod. Co. No. 1 Mount, S.P.R.R. Sur., sec. 9. R.U.R.

Whitehead et al No. 1 W. Reed, F. Earthman Sur. A-349. Drlg. 695 ft.

Woodbine Oil Co. No. 1 Potter & Potter, J. Gorham Sur. Drlg. 997 ft.

Denton County

Oil Finance Corp. No. 1 J. S. Gambill, T. Burress Sur. S.D. 1,042 ft.

C. S. Hoad No. 1 Travelers Insurance Co., Wm. A. Thompson Sur. A-1,238. Drlg. 857 ft.

Manning & Moore No. 1 E. L. Darnell, I. Walters Sur. A-1,329. Loc.

Foard County

Humble O. & R. Co. No. 1 Burnett, sec. 16, Blk. X, S.P.R.R. Sur. Fishing 3,210 ft.

Jack County

Bryson Oil & Gas Co. No. 1 G. E. Evett, Geo. Hardesty Sur. A-294. Drlg. 4,100 ft.

S. B. Edwards No. 1 Bryson, J. Hughson Sur. A-256. R.U.R.

Engineers Oil Co. No. 1 Cooke, J. Young Sur. 10-in. parted; fishing 1,800 ft.

W. H. Hammon No. 1 G. E. Evett, H. Plaster Sur. Spudded and S.D.

W. H. Hammon et al No. 1 F. H. Rhodes, R. N. Erwin Sur. A-1,378. Drlg. 665 ft.

Harper Pet. Corp. No. 1 Van Hooser, J. W. Morrow Sur. A-1,926. Drlg. 1,400 ft.

C. Kadane No. 1 E. F. Smith, S.P.R.R. Sur. A-552. Drlg. 1,195 ft.

Nelson Oil Synd. No. 1 J. P. McCoy, A. S. Ensworth Sur. Est. 40 bbls.; P.O.P.

Panhandle Ref. Co. No. 1 Klingiesmith, M. Hamilton Sur. A-262. S.S.O. 2,910-18 ft.; testing.

Ray & Staniforth No. 1 L. J. Hester, J. Ash Sur. A-8. Drlg. 2,550 ft.

Montague County

A. Gutowsky et al No. 1 J. E. Lemmon, Blk. 13, C. K. Hamm Sur. A-332. Drlg. 1,480 ft.

E. T. Hart No. 1 W. L. Davis, sec. 12, Jack Co. School Lds. Drk.

Jim Seeds et al No. 1 Coombs, sec. 56, M.E.P.&P. Sur. Drlg. 1,330 ft.

J. M. Holmes No. 1 H. D. Field, sec. 55, M.E.P.&P. Sur. A-528. S.S.O. 2,226-30 ft.; testing.

Southwest Pet. Co. No. 1 W. S. Petty, S. A. Southerlin Sur. A-992. R.U.R.

Wichita County

Fisher & Moore No. 1 Gibson, sec. 302, Sand 1,834-60 ft.; C.O. 1,935 ft.

Pete Harmon et al No. 1 J. B. Jamison, J. Deck Sur. A-52. Drlg. 70 ft.

Reno Oil Co. No. 1 W. T. Waggoner-D, sec. 1, S.&M. Sur. A-393. Drlg. 1,440 ft.

Wilbarger County

Franklin Oil Co. No. 1 D. G. Feller et al, sec. 108, Blk. 14, H.&T.C. Sur. S.D. 1,570 ft.

Lane & Simons No. 1 Allison, sec. 43, H. &T.C. Sur., Blk. 12. S.D. water.

Pols & Schultz No. 1 W. T. Waggoner, sec. 103, H.&T.C., Blk. 14. Drlg. 1,320 ft.

Smith No. 1 S. A. Dill et al, sec. 32, Blk. 14, H.&T.C. Sur. S.D. 2,090 ft.

L. Webb No. 1 J. L. McCrary, sec. 64, H.& T.C. Sur., Blk. 14. Drlg. 1,528 ft.

Young County

L. T. Burns No. 1 C. E. Braune, T.E.&L. Sur. 138. Drk.

Christie Bros. No. 1 Primitive Baptist Church, S. L. Hill Sur. A-126. P.B. 3,814 ft.; testing 3,812-58 ft.

C. C. Counts No. 1 W. E. Edwards, T.E.& L. Sur. 71. Tested est. 50 bbls., 1,416-18 ft.

Curtis & Bracken No. 1 Allar Co., H. Garmes Sur. A-104. P.B. to 3,800 ft.; est. 50 bbls., 3,725-50 ft.; treating with acid.

Dobbs Oil Co. and McLester No. 1 Laquey, J. Busse Sur. A-1,570. Sd. 4,112-26 ft.; treating with acid.

C. D. Neff et al No. 1 W. A. Dennis, C. F. Bass Sur. Drlg. 2,855 ft.

Pitzer & West No. 1 W. R. Dollim, T.E.& L. Sur. 615. Loc.

Pitzer & West No. 1 Harrell, J. Daily Sur. A-78. Drlg. 2,900 ft.

Pitzer & West No. 1 S. L. Thornton, sec. 1,015, T.E.&L. Sur. A-324. Drlg. 4,095 ft.

Rathke Oil Co. No. 2 J. T. Rogers, S. H. Graham Sur. A-124. Drlg. 4,043 ft.

Roy Weggener No. 1 J. W. Davis, T.E.& L. Sur. 752. S.D. 320 ft.

EAST TEXAS

(Border Counties)

Cass County

American Liberty Oil Co. No. 1 Marcus Rembo, J. H. Reeves Sur. Cg. 5,685 ft.

American Liberty Oil Co. No. 2 Maxie, John Collum Sur. Drlg. 3,680 ft.

American Liberty Oil Co. No. 3 Maxie, John Collum Sur. Set 16-in. 221 ft.; set 10¾-in. 2,020 ft.

McElvane et al No. 1 Beckett, John Collum Sur. Set 16-in. 230 ft.; set 10¾-in. 1,991 ft.

R. W. Norton No. 2 Haywood, Priscilla Evans Sur. Set 13⅜-in. 219 ft.; set 9⅝-in. 2,097 ft.

R. W. Norton No. 2 Mary Rives, John Collum Sur. Cg. 6,003 ft.

Texas Co. No. 1 E. E. Hall, James Young Sur. R.U.

United Gas Pub. Ser. Co. No. 1 Eva Fields, John Collum Sur. Set 13⅜-in. 325 ft.

United Gas Pub. Ser. Co. No. 2 Eva Fields, John Collum Sur. R.U.

Harrison County

R. C. Payne et al's No. 1 Lowery, H. D Spain Sur. P.B. to 3,524 ft.

Marion County

[illegible] Holman's No. 1 Henderson, R. Bessington Sur. P.B. to 2,443 ft.

NORTH TEXAS COMPLETIONS

Completions in the North Texas district, with their top of sand and total depth records and initial production were as follows:

Archer County

L. T. Burns No. 1 Turbeville-K, 1,542 feet, dry; No. 94 White, 726 feet, dry. Cable Oil Co. No. 10-C Webb, 702-13 feet, 10 bbls.; Fain-McGaha No. 6 Wilson-F, 1,625 feet, dry. Hamilton Petroleum Co. No. 36 Abercrombie, 1,151-59 feet, 70 bbls. Petroleum Production Co. No. 17 Richardson-E, 1,242-61 feet, 60 bbls. Regal Oil Co. No. 3 Wilson, 1,610-13 feet, 150 bbls. Texas Co. No. 1 W. O. Haytor, 1,422-27 feet, 50 bbls.

Baylor County

Morris & Spoonts No. 2 Holman, 540 feet, dry; No. 1 Martin, 969 feet, dry. Petroleum Production Co. No. 29 Portwood, 1,398-1,408 feet, 40 bbls.

Clay County

Metzner & Burns No. 1 G. H. Winfrey, 492 feet, dry.

Cooke County

Fisher & Moore No. 1 F. J. Yosten, 920-27 feet, 45 bbls. T. P. Frost No. 4 J. Rohmer, 793-836 feet, 15 bbls. L. A. Long No. 1 Sarles, 2,358 feet, dry. Murray Investment Co. No. 6 L. Rohmer, 964-71 feet, 50 bbls. Petroleum Production Co. No. 1 J. W. Yount, 1,544-1,650 feet, 20 bbls. Seitz, Comegys & Seitz No. 6 R. W. Trew-A, 1,094-1,104 feet, 156 bbls.

Jack County

Clark and others No. 3 Singleton, 804 feet, dry. Knott and others No. 1 William Johnson, 730 feet, dry.

Montague County

Continental Oil Co. No. 30 J. M. Maddox-A, 894-919 feet, 20 bbls. Perkins & Cullum No. 8 N. J. Howard, 1,367-93 feet, 20 bbls.

Wichita County

W. B. Omohundro No. 1 S. P. Gibson-B, 1,890-1,908 feet, 15 bbls. H. L. Rugeley No. 9 Waggoner-A, 1,564-92 feet, 125 bbls. Waggoner Refining Co. No. 5 Waggoner-AA, 1,573-84 feet, 61 bbls. A. B. Wharton No. 5 Waggoner-B, 1,592-96 feet, 50 bbls.; No. 6 Waggoner-B, 1,978-88 feet, 275 bbls.

Wilbarger County

Fain McGaha Oil Corp. No. 6 Waggoner-Y, 2,398-2,415 feet, 75 bbls. Edwin S. Smith No. 1 Waggoner, 1,919 feet, dry. Wheeler & Brashear No. 1 Waggoner-A, 2,406 feet.

Young County

Boyd & Kimberlin No. 2 A. C. McDonald, 601-07 feet, 5 bbls. L. T. Burns No. 1 Dora Logan, 1,302 feet, dry. V. E. Elkholm, trustee, No. 2 E. H. Remington, 667 feet, dry. N. D. Goldsmith No. 2 O. B. Stow, 1,135 feet, dry. Hamilton Petroleum Co. No. 1 Lowe, 849 feet, dry. B. H. Honea No. 14 Honea, 863-74 feet, 30 bbls. J. E. McDonald No. 1 Jeffery, 842-44 feet, 12 bbls. Underwood & Campbell No. 4-E Campbell, 951 feet, dry; No. 5, 872-82 feet, 100 bbls. Wichita Petroleum Co. No. 1 T. M. Routen, 852 feet, dry. L. A. Long No. 2 Williams-E, 2,480-2,553 feet, 35 bbls. Nash & Windfohr No. 1 Simms, 3,726-69 feet, 800 bbls. of oil and 2,500,000 feet of gas.

PERSONAL

G. W. O'BRIEN is one of the largest landowners, ranchers and oil property owners in West Texas, owner of the famous O'Brien ranch in Ward County, on which the Gulf Oil Corporation has 67 producing wells and Richardson has 11, with 3 rigs running steadily in drilling up more locations. His home is at Wickett, which is encompassed by his large ranch, 22,400 acres of which is under lease by the Gulf Oil Corporation.

L. G. HUEY, scout for the Magnolia Petroleum Company at Tyler, Tex., is convalescing from an appendectomy.

W. G. ROWE, who returned to Toronto recently from California, has left again for the Pacific Coast on business.

M. E. WAGNER, vice president, Marathon Oil Company, Tulsa, has been visiting his mother in Greenville, Ohio.

J. D. HUGHES, president of the Eastman Oil Well Surveying Company of Texas, is on an extended business trip to New York City.

TED GORDON, scout and land man in Kansas for Pure Oil Company, has been to Centralia, Ill., on company business. His headquarters are in Wichita.

BARNEY WOOLVERTON, veteran scout in the Tonkawa and Three Sands, Okla., districts, has assembled a block of leases around section 36-23-2w, in Noble County and a test is reported pending.

MERLE M. ROBINSON has been appointed district manager of the Sun Oil Company at Boston, Mass. He was previously district manager at Buffalo, N. Y., and has been succeeded in the latter post by JOSEPH H. COON.

W. K. WHITEFORD, vice president, British-American Oil Producing Company, Tulsa, drove to Florida last week to bring his family back to Tulsa after spending the winter in Florida.

MISS FLORENCE LUNDELL, librarian of technical department, Tulsa Public Library, is attending the national convention of the American Library Association at Richmond, Va., and also visiting relatives in Baltimore, Md.

A. R. CARMODY, manager, and JOHN WIMPLE of the North Central Texas Oil Company, Inc., of Shreveport, La., have been confined to their homes by illness. Mr. Carmody was able to return to the office late last week.

E. P. ROWE, oil operator, has returned to Toronto, Ontario, from a two weeks' holiday at Atlantic City, N. J.

E. G. MOSIER has been appointed manager of H. M. Mosier interests, formerly the Petroleum Company, Tulsa, and E. M. SIM, of Kiefer, Okla., has been made superintendent, effective May 1.

ERNEST N. PUETZ, assistant secretary and assistant treasurer of the Emsco Derrick & Equipment Company, and S. P. FARISH, chief engineer of the mechanical division, have been elected members of the board of directors.

A. V. BOURQUE, secretary-treasurer of the Western Petroleum Refiners Association, announces that G. E. EVERETT, formerly secretary of the Low Cost Roads Association, has become a member of the staff of the Western Petroleum Refiners Association, and is now located in Tulsa. The promotion for further use of road oil and asphalt has been made a Western Petroleum Refiners Association departmental activity.

WILLIAM G. WOOD, purchasing agent for the Continental Supply Company, Dallas, Tex., was elected president of the Dallas Purchasing Agents Association during the past week.

DR. ULRIC B. BRAY has been appointed assistant manager of research at the Los Angeles Laboratory, Wilmington, of the Union Oil Company of California. DONALD E. CARR has been appointed a research supervisor at Wilmington. Doctor Bray was promoted from the position of research supervisor, which he had held for seven years. He is a graduate of Emory University at Atlanta, Ga., received his doctor's degree in chemistry from Yale, and was a National Research Fellow at California Institute of Technology.

CORNELL N. PFOHL, JR., of Bradford, Pa., was elected president of the Bradford District Pennsylvania Oil Producers Association. Other officers elected include: TOM D. MALLORY, first vice president; LYNN G. SMITH, second vice president; D. B. TANNER, secretary, and A. E. BOOTH, treasurer. The executive committee includes: D. T. ANDRUS, A. E. BOOTH, GEORGE BOVAIRD, JR., F. D. DORN, E. C. EMERY, R. M. HASKELL, W. J. HEALEY, PARKER L. MELVIN, C. N. PFOHL, JR., W. J. SLOAN, C. F. STEVENSON, C. E. STREETER, T. P. THOMPSON, JR., H. J. WALTER and TOM D. MALLORY.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Gasoline engines have about put the windmills out of business. "About all that is left of the old windmills put up a dozen years ago is the iron tower with the wheel hanging to it bent out of shape by storms."

A joint uncorporated association to be known as the Magnolia Petroleum Company has been organized with headquarters in Galveston and plants and offices in Beaumont and Corsicana, Tex. The association will enter actively into the general distribution and marketing of petroleum and its products.

20 YEARS AGO

Owing to high prices of gasoline, refineries have been busy, but jobbers have stocked up heavily and plants are slowing up. "Eighteen cents a gallon is about as high a figure as buyers are willing to offer manufacturers of gasoline."

A syndicate whose announced object is to cheapen gasoline is reported to be experimenting with several mysterious chemical combinations, one of which, it is asserted, will put the prices down "almost to zero."

A well near Caddo, 6 miles south of Mineral Wells, in the North Texas field, has a showing of 1,000,000 feet of gas, with indications of oil. More drilling is promised.

Government prognosticators say petroleum reserves will be exhausted in 27 years.

10 YEARS AGO

While it will be years before commercial oil production and its transportation are established in the Iraq fields, an agreement assuring participation of the American group in the Turkish Petroleum Company again focuses attention on the possibilities of that area.

David C. Richardson, 58, pioneer operator in North Louisiana, discoverer of Caddo field, died in Shreveport, La.

Experiments with a crude oil automotive engine installed in a four-ton truck are exciting interest.

Another big well in the Panhandle field of Texas boosts the daily output of that amazing area above 17,000 barrels, causing upward revision of estimates on peak production.

J. W. McINTOSH, of Mt. Pleasant, Mich., former Muskegon contractor, has returned from a week's trip to Leedville, Pa.

WINCHESTER BRITTON, president of the Packing Engineering Corporation, has returned from an extensive tour of South America.

GEORGE TAYLOR, geologist for Continental Oil Company, has been transferred from Ponca City, Okla., to the company's office at McPherson, Kans.

N. E. TANNER, formerly an independent operator of Houston, Tex., is now associated with the Tide Water Oil Company as land man at Midland, Tex.

S. F. SHAW has been engaged by Hall & Briscoe as consulting engineer in connection with building a gas-lift plant in the Capitol extension of the Oklahoma City field.

GILBERT W. NOBLE, of St. Louis, Mo., who recently completed the work on his degree of Doctor of Science in Mining Engineering at the Massachusetts Institute of Technology, was a recent visitor in Tulsa.

BERT RIDGEWAY, formerly of Wichita, Kans., headquarters of the Empire Oil and Gas Company, recently was transferred to Mt. Pleasant, Mich., to succeed RAY HUNT, who has resigned to accept a position as geologist and vice president of the Cryden Oil Company.

J. P. D. HULL, business manager, American Association of Petroleum Geologists, announces the location of the association headquarters is now 608 Wright Building, Tulsa, also that this is the tenth year since the establishment of association headquarters with full-time staff.

PARAGRAPHS

P. E. McCLANAHAN, district representative for the Oil Well Supply Company at Midland, Tex., was flown to a Fort Worth hospital during the week after contracting pneumonia.

WILSON CROSS, of London, England, director of the Vacuum Oil Company, and for 13 years president of the American Club in London, spent 10 days in Los Angeles, Calif., recently en route from Honolulu to London.

R. M. SANDS, vice president and general manager of the Petroleum Securities Company, left Los Angeles, Calif., to attend the annual meeting of the Tide Water Associated Oil Company, in which Petroleum Securities is a stockholder.

E. R. WHITE, in the engineering department of Gulf Oil Corp., Odessa, Tex., was married to MISS LOUIE MILES of Fort Worth, Tex., in Fort Worth, April 25. MISS LOMA WHITE, sister of the bridegroom, with the Stanolind Oil & Gas Company at Tulsa, attended the wedding.

W. W. ORCUTT, vice president of the Union Oil Company and organizer of the first geological department on the Pacific Coast, was the guest speaker at the monthly meeting of the Historical Society of Southern California held recently in the auditorium of the Southern California Edison Company in Los Angeles.

H. W. PENTERMAN, Houston, Tex., visited Tulsa last week.

J. ELMER THOMAS, consulting geologist of Fort Worth, Tex., was a visitor in Tulsa last week.

C. O. FORBERG, independent oil operator, Tulsa, is in Casper, Wyo., looking over prospective oil properties.

E. L. MOORE, scout for the Gulf Oil Corporation at Denver, Colo., was in central Wyoming checking on operations.

A. G. GALBRAITH has been named assistant vice president in charge of personnel of the Union Oil Company of California.

O. F. ACKLEY, land manager of the Mid-Continent area for the Shell Petroleum Corporation, was transferred May 1, to Michigan.

JOHN WENZEL of the land department of Shell Petroleum Corporation, Tulsa, has been transferred to the Wichita, Kans., office.

CLAUDE HILDEBRAND, zone agent of Phillips Petroleum Company in the Panhandle field of northwest Texas, at Amarillo, was a Tulsa visitor last week.

CLENNAN HEMSELL, geologist and land man for the Cabot Carbon Company, has been transferred from Amarillo, Tex., to Kansas on a temporary assignment.

C. R. PARRISH, superintendent of pipe lines for Sinclair-Wyoming Oil Company, is rapidly improving at the Memorial Hospital, Casper, Wyo., where he has been ill with erysipelas. DR. F. L. FLACK, chief surgeon for the Sinclair Companies, Tulsa, arrived in Casper by airplane, to render medical service to Mr. Parrish.

C. J. McFARLANE, sales engineer of Ethyl Corporation, recently gave an illustrated lecture on "Modern Motors and Their Fuels," at Hotel Palliser, Calgary, Alberta.

EARL SMITH, assistant superintendent of the Canadian Oil Companies, Ltd., refinery, addressed the Petrolia, Ontario, Lions Club recently on "Crude Petroleum and the Refiner."

JOHN D. REYNOLDS, former secretary of the Western Petroleum Refiners Association, who has been associated with the refining and marketing branches of the petroleum industry for more than 20 years, recently opened an office in Chicago, marking his return to civil practice.

P. D. MELLON, of Calgary, Alberta, chief engineer of the Canadian Western Natural Gas, Light, Heat & Power Company, accompanied by R. S. WINTER, local superintendent, and A. G. BAALIM, director, of Lethbridge, recently inspected the Terminal Oil Company No. 1 on the Del Bonita structure in southern Alberta.

CARLETON D. SPEED, JR., has returned to Houston, Tex., after spending the winter in Michigan and Canada on consulting work returning to open offices of Speed Oil Company, of which he is president. He was born in Corsicana, in 1903, son of C. D. SPEED, SR., who has produced oil at Corsicana for 36 years. He started working in Ranger in 1920, saving money for a college education. Upon graduating from Texas A. and M. in 1926 he worked one year for Atlantic Oil Producing Company along the Mexia-Corsicana fault zone doing seismograph and torsion balance work. In 1929 he worked in the geological department of the Gypsy company in Oklahoma and Kansas.

ART BARNEY, assistant geologist for the Piney Oil and Gas Company, Amarillo, Tex., has been transferred by the company to Charleston, W. Va.

CAPT. J. F. LUCEY, of Dallas, Tex., was in Los Angeles, Calif., recently.

JOE CANNON has joined the staff of the Green Head Bit & Supply Co. at Oklahoma City.

HENRY LANGSPECHT, chief scout of Shell Petroleum Corporation, Tulsa, who has been ill, has recovered.

M. A. COOK, Toronto, Canada, oil man, has returned to his home after transacting oil business in Wichita, Kans.

ROY N. BEAN is now connected with the Burt Corporation of Tulsa as Gulf Coast representative at Houston, Tex.

COL. T. H. BARTON, president of the Lion Oil & Refining Company, was a visitor in New York City over the week-end.

E. W. EVANS, of Ohio Oil Company, Findlay, Ohio, was a recent visitor at the Marathon Oil Co. offices in Tulsa.

A. P. RUTHER, manager of the crude oil department in the St. Louis office of the Shell Petroleum Corporation, was a recent visitor to Tulsa.

JACOB FRANCE, president of the Mid-Continent Petroleum Corporation, returned to Baltimore, Md., last week. He will return to Tulsa ro attend the International Petroleum Exposition.

E. WASSER, Derby Oil Company, was appointed temporary chairman of the Kansas chapter of the Petroleum Accountants Society, organized at Wichita last week. L. M. WOODWARD, also of the Derby company, was appointed temporary secretary-treasurer.

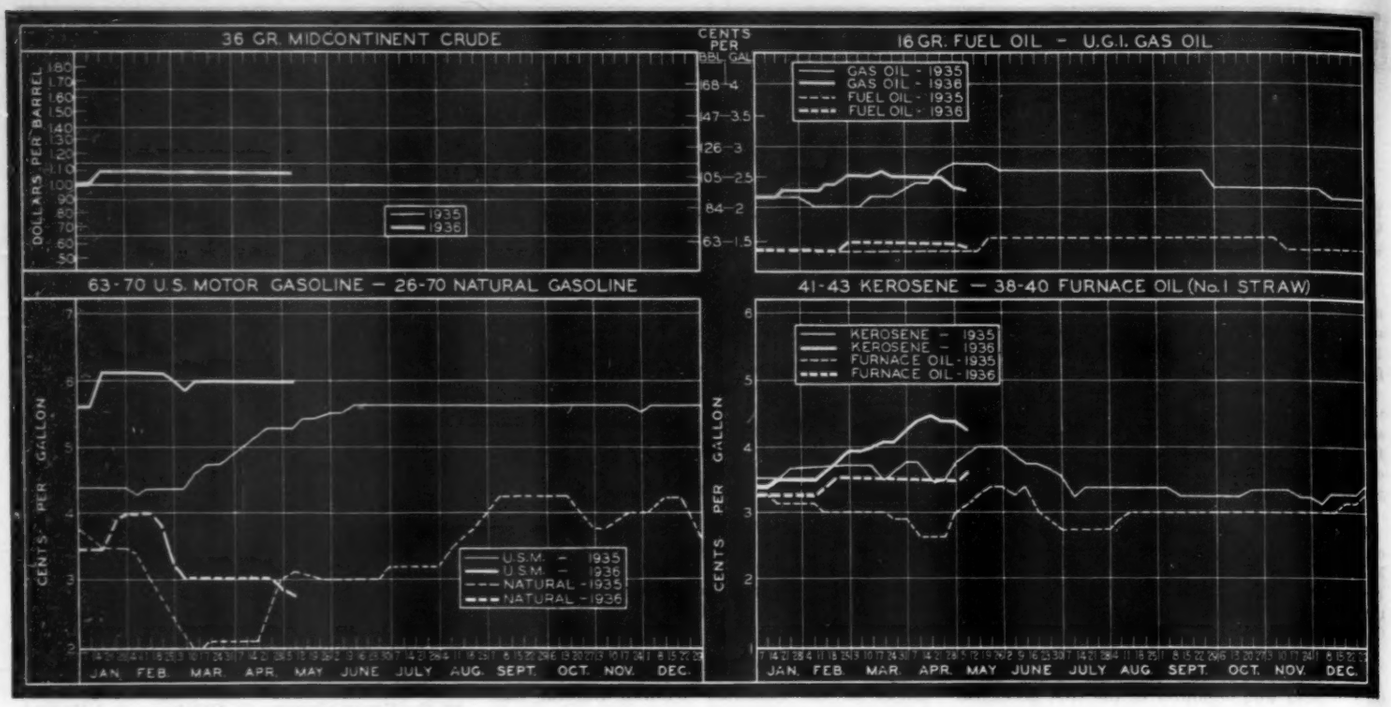
Discoveries His Hobby

When Al Buchanan, independent operator and drilling contractor of San Antonio, Tex., isn't tied up by other work he goes out and drills a discovery well. Eight times in the last six years he has found himself sufficiently free from the press of other duties to indulge his hobby. The fields they opened up were: Buchanan, Caldwell County; S. R. C. and Eagle Hill, Duval County; Garwood, Colorado County; Loma Novia and North Loma Novia, Duval County; Sinton and Plymouth, San Patricio County.

AL BUCHANAN

Mr. Buchanan's career as an oil operator has been pretty much centralized in Southwest Texas since 1924. Before that he had operated in Oklahoma, Arkansas, Louisiana, Mississippi, California and various areas in Texas. He started as a roughneck at Petrolia, Tex., in 1908, working first as a truck driver on a pipe line job. Soon he became a driller for the Producers Oil Company and he was transferred to Electra. Later he became superintendent for the Monk Drilling Company. In 1919 he started out for himself as a drilling contractor. As a member of the firm of Hughes & Buchanan he drilled the famous No. 2 Burk Divide in the Red River bed, involved in a boundary dispute between Texas and Oklahoma.

The possibilities of Southwest Texas attracted Mr. Buchanan so that in 1924 he left the partnership and went to San Antonio. Independently he has drilled more than 200 wells in Southwest Texas.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1935
1936
CENTS PER BBL GAL
16 GR. FUEL OIL - U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE — 38-40 FURNACE OIL (No.1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Refined and Natural Gasolines Show Signs of Improvement in Group 3

By T. F. SMILEY

Better feeling was perceptible this week in both the refined and the natural gasoline markets in the Group 3 area. In neither division was the improved tone anything to get excited about, but it afforded a welcome change from torpor that had become tiresome.

Contract movement of motor fuel was reported to have been growing in volume during the last week, with the increase especially noticeable in the last few days. At the same time spot business has shown a little quickening. Jobbers who buy house-brand gasoline on contract buy third-grade material both on contract and in the spot market. When they have taken up their quota under their contracts they begin to buy in the open market. For months the spot demand for third-grade gasoline has been negligible, but now jobbers who are entitled to no more of it on contract are entering the spot market with modest orders. Some jobbers buy all their third-grade gasoline in the open market, and these are now increasing their orders.

Lake Navigation Helps Little

Although navigation is opening again on the Great Lakes, permitting shipment of gasoline stored in Chicago terminals, all the favorable results expected are apparently not being realized. Reduction of stocks in Chicago terminals would ordinarily mean that gasoline which had been stored at Mid-Continent refineries could be shipped to that lake port to take the place of material barged out. As a matter of fact Mid-Continent refiners say their shipments into the Chicago area are meeting increased competition instead of readier purchase. This situation is said to have grown out of shipments from Michigan refineries. Mid-Continent gasoline and Michigan gasoline seeking purchasers in the Chicago area seem to have produced a market situation for the time being in which the Chicago price structure, based on Group 3, is somewhat softer than the price structure in Group 3 itself.

Refined Oil Market Barometer

Better feeling generally pervaded the market. Increasing demand for gasoline afforded basis for increased hope that immense stocks on hand can be disposed of in the approaching season of heavy consumption. Naturals are in better position than last week. Tractor fuels and bright stocks trending upward.

MID-CONTINENT. Refined and natural gasoline slightly steadier. Bright stocks firm.

EAST COAST. End of retail gasoline price war in sight. Tankcar prices firmer.

GULF COAST. Gasoline weak. Kerosene firm.

PENNSYLVANIA. Bright stocks, neutrals moving well. Gasoline improving.

CALIFORNIA. General market quiet. Gasoline soft. Natural firmer.

CHICAGO. Gasoline demand expanding gradually. Tractor fuels in active demand.

While the Group 3 tankcar gasoline market was steadier, the retail market continued to have its sore spots. Independent retailers in the Tulsa district who recently cut their price on third-grade material to 13 cents were still selling at that price this week, and one filling station operator was offering it at 11½ cents. This price war was said to be a local one, without signs of spreading to other areas. Gossip in the trade mentioned the possibility of major companies bringing the squabble to an end by slashing their own prices to whatever point the price-cutters might care to take them. No authentication of the rumors was obtainable.

Notwithstanding the fact that natural gasoline quotations underwent a further decline, the opinion was expressed in the trade that they probably had touched bottom for the season, and if they did go lower it would be only a little. West Coast buying injected a more cheerful tone into this division of the Group 3 market. Available statistics have shown the natural gasoline stocks held on the West Coast to be inadequate to meet the refinery needs of that region. These stocks are in the hands of the large companies and they have been held at a price which independent refiners did not care to pay. As a result of this situation one cargo of natural was shipped from a Gulf Coast port for California buyers.

Looking for Bargains

Inquiries arriving indicate that demand may be picking up a little and that it may be near the point at which it will be in balance with supply. The inquiries were said to have been from bargain hunters, who offered prices which stirred only mild interest. Foreign inquiries were reported, but the prices offered were below ruling levels, with no takers. The very fact that inquiries now are increasing is viewed as a favorable development however.

Rains which visited many farming areas started plowing operations, with consequent invigoration of the demand for tractor fuels. Kerosene and the high-gravity distillates, which had been a bit soft, firmed in sympathy with the tractor fuels. Bright stocks were reported to be strong at prices unchanged from last week. Neutrals were firm. Wax was weak.

Eastern Market Encouraged by Ending of Price War in Philadelphia Area

NEW YORK, May 4.—Eastern gasoline marketers were greatly encouraged by the apparent ending of the long drawn-out gasoline price war which has been under way in the Philadelphia-Camden area. The Atlantic Refining Co. appears to have taken the lead in restoring the price structure in this locality to nearly normal. It advanced the tank-wagon market in Philadelphia on May 2 one-half cent per gallon to 16½ cents, and the retail market 1½ cents to 17½ cents, including taxes. A week previously the same company had cut the tank-wagon price to 16 cents and the retail price to the same figure, and at these levels its quotations were still above those of some of its competitors. Some of the other marketers in the Philadelphia district indicated that they would follow with an advance of approximately 1½ cents per gallon in both tank-wagon and retail prices as of May 3.

While no advances have been reported in the Camden area in southern New Jersey, the market here is momentarily expected to follow the Philadelphia advances, and if they do it will mark the close of the most disturbing price war which has been witnessed in the eastern territory this spring.

The gasoline trade regards the improvement in the Philadelphia situation as being due mostly to the exhaustion of some low-priced material which had apparently come into the market from the Gulf by way of tank-steamer. This material struck the market at a time when it was particularly vulnerable. Stocks of gasoline already on hand were excessive and consumption had been unfavorably affected by abnormally cold weather.

The trade had commented on the fact that in spite of this situation the refinery gasoline market on the Atlantic Seaboard had remained steady. The purely local nature of the disturbance seemed to have been thoroughly demonstrated. This has been further established by the restoration of prices to more normal levels and by the firming up in wholesale prices which has followed.

Refinery gasoline of 65 octane is reported to be scarce at 6¾ cents per gallon, at which price the market has been stabilized for several months. While trades at higher levels cannot be confirmed it has been reliably reported that some factors in the wholesale market are expecting an advance to 7 cents in the near future. Such a development would undoubtedly bring a renewal of the optimism which was in evidence in the trade two months ago, and which was interrupted by the floods and generally bad weather.

In some high market circles in the East the reaction in sentiment which occurred in recent weeks is regarded as having been a boon to the industry during a critical period, when inventories of gasoline had reached perilous heights and the seasonal increase in consumption, usually expected at this time, had been below expectations. Now, seasonal factors seem to be getting in their good work. Inventories are showing a highly satisfactory reduction, a fact which is being reflected now in the price structure in the localities where it has been weakest. The importance of adopting a conservative attitude toward the market at this time of year is becoming increasingly evident, in view of the unfortunate experiences which the industry has had along this line, resulting in a subnormal price structure for the industry's best-paying product during the season of heaviest consumption, as against the improvement now in evidence.

One of the major marketing organizations in the Philadelphia area which sells more than one grade of gasoline at retail commented on the disadvantages such a company has in meeting the competition from companies marketing only a single grade, during a period of weakness such as this locality has experienced. Although this comment may not have had any particular significance, nevertheless it brings into question the selective tendencies of the public with respect to motor fuel. The question of the advisability of carrying different grades has probably never been satisfactorily answered. The practice originated in the desire to meet competition from low-quality, cut-price material. But with the latter reduced to a minor factor in the marketing situation, it will be interesting to note the policy of the leading marketing companies, with respect to continuance of the sale of two or three grades, instead of one.

The trend of public demand undoubtedly will prove the determining factor. In some quarters it is hinted that the larger organizations marketing only a single grade, have found this policy more and more advantageous with the strengthening of the underlying motor fuel price situation.

Canada Reduces Gasoline Tariff

The action of the Dominion of Canada in reducing the import tariff on gasoline to 1 cent per Imperial gallon, from 2¼ cents, is also regarded as a highly favorable development in the eastern motor fuel situation. The reduction is effective immediately and should be of the most direct benefit to western Pennsylvania refiners many of which at one time did a large gasoline business in Canada. But it will also help the entire eastern markets, according to the belief of the local trade.

The fuel oil markets continue firm. Bunker fuel oil is probably the strongest feature, with a price advance having been expected for some time. Furnace oil is moving at a highly satisfactory rate for this time of year, due to the fact that more than an average number of consumers have heeded the advice to stock up in advance at the lower prices now prevailing.

Lubricating oils, wax and petrolatum markets are steady with the trade at recently established increased prices reported active.

The reduction in the Canadian import duty on gasoline to 1 cent per Imperial gallon, from 2¼ cents, is without doubt the most important development in the export situation. Should this mark a change in general attitude toward international trade, a broad revival in the American oil export markets might be expected. Unfortunately, this can be regarded only as an isolated action, and, if anything, contrary to the general trend abroad.

One oil export authority states that the American oil export market is gradually being throttled by import duties and restrictions being placed in effect, especially in Europe. However, this may be an extreme view of the case. Many authorities believe a reaction from the extreme attitude which has hurt international trade is about due, particularly in Great Britain and France.

As matters stand in the export oil trade, activity, especially in the Gulf market, is at a very low ebb, but prices are holding, due principally to support from the domestic trade, where the wholesale gasoline market is said to be quite firm. Should the Mid-Continent market hold a while longer, it is believed in some export circles that there may be a heavy renewal of buying of cargo lots on the part of European interests, who have been watching this market closely and holding off buying in expectation of lower prices. Still another factor which might aid the American oil market is an adjustment of the French monetary policy, which is now in an uncertain position.

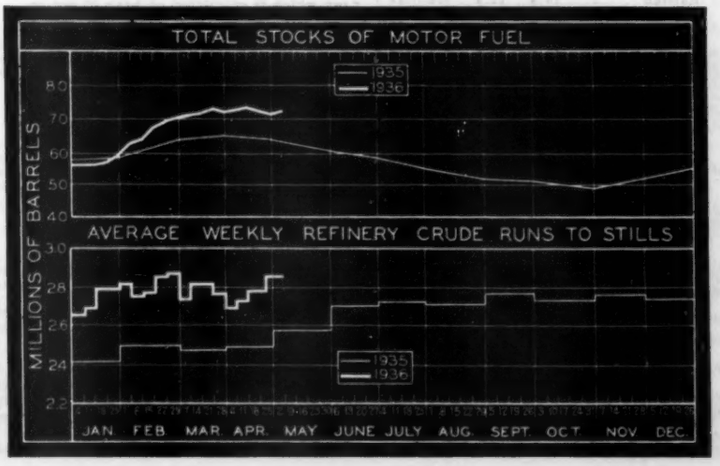
In other words, export authorities believe that the inactivity which has been the rule in the Gulf gasoline export market for several months past, may end in the near future, and that it is apt to break way on the side of improvement, rather than otherwise.

A. P. I. Weekly Refinery Statistics

Week Ending May 2, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total, gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	505,000	20,466,000	6,961,000
Appalachian	94.8	94,000	2,765,000	390,000
Indiana, Illinois, Kentucky	95.9	404,000	11,370,000	2,949,000
Oklahoma, Kansas, Missouri	84.8	276,000	7,710,000	2,500,000
Inland Texas	48.5	90,000	1,662,000	1,632,000
Texas Gulf	96.8	596,000	8,109,000	6,250,000
Louisiana Gulf	96.4	115,000	1,951,000	2,039,000
North Louisiana and Arkansas	90.0	49,000	410,000	340,000
Rocky Mountains	61.9	41,000	1,624,000	752,000
California	92.6	509,000	12,771,000	70,989,000
Total reported	89.6	2,679,000	68,838,000	94,802,000
Estimated unreported	.....	196,000	4,126,000	1,907,000
*Estimated total	.....	2,875,000	72,964,000	96,709,000
*Estimated total previous week	.....	2,875,000	72,537,000	96,802,000
†May 31, 1935	.....	2,594,000	61,483,000	100,177,000

*Bureau of Mines basis currently estimated. †Monthly report, U. S. Bureau of Mines.



RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of May 5, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 2 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Chicago	15.0	17.0	4.0	10.1
Decatur, Ill.	16.0	18.0	4.0	10.1
E. St. Louis	15 7	17.7	4.0	9.8
Joliet	16.0	16.5	4.0	10.1
Joliet	16.0	17.0	4.0	10.1
Quincy	15.8	17.8	4.0	9.9
Davenport, Ia.	16.0	(†)	4.0	10.1
Des Moines	15 8	(†)	4.0	9.9
Mason City	16 2	(†)	4.0	10.3
Sioux City	16.0	(†)	4.0	10.1
Duluth, Minn.	16.8	18.8	4.0	10.9
Mankato	16 4	18.4	4.0	10.5
Minneapolis	16 4	18.4	4.0	10.5
LaCrosse, Wis.	17 4	19.4	5.0	10.5
Green Bay	17.7	19.7	5.0	10.8
Milwaukee	16.3	18.3	5.0	10.4
Madison	17.4	19.4	5.0	10.5
Detroit, Mich.	14.0	16.0	4.0	8.8
Grand Rapids	16.4	18.4	4.0	9.3
Saginaw	16.6	18.6	4.0	10.1
Evansville, Ind.	17.7	19.7	5.0	10.6
Indianapolis	17.9	19.9	5.0	10.8
South Bend	18.1	20.1	5.0	11.0
Fargo, N. Dak.	17.4	19.4	4.0	11.5
Huron, S. Dak.	17.9	19.9	5.0	11.0
Sioux Falls	17.4	19.4	5.0	10.5
Kans. City, Mo.*	15.4	17.4	4.0	9.5
Springfield	15.1	17.1	4.0	9.2
St. Louis	15.7	17.7	4.0	9.8
St. Joseph*	15.4	17.4	4.0	9.5
Wichita, Kans.	14.3	16.3	4.0	7.1
Bartlesville, Ok.	15.0	19.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in Iowa.

Discounts to dealers except in Iowa: 2½ cents on premium and regular and 2½ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective February 10, 1936, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.75 cents; 100-149 gallons, 7.75 cents; 150 gallons and more, 7.25 cents. 1 (34-40 lt. sfw. zero), less than 100 gallons, 8.75 cents; 100-149 gallons, 7.75 cents; 150 gallons or more, 7.25 cents; No. 2, (32-34 zero), less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents; No. 4 (12-16 zero), less than 400 gallons, 7.5 cents; 400 gallons or more, 6.5 cents, viscosity of No. 4, 35° and 100° F.; No. 5, less than 400 gallons, 5.75 cents; 400 gallons or more, 4.75 cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Denver, Colo.	18.0	20 0	5.0	11.0
Pueblo	18.0	20.0	5.0	13.0
Grand Junction	21.5	23.5	5.0	15.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	21.0	....	6.0	14.5
Billings	22.5	24.5	6 0	14.5
Helena	22.5	24.5	6.0	17.5
Great Falls	20.0	22.0	6.0	14 5
Salt Lake, Utah	21.0	23.0	5.0	15.0
Twin Falls, Ida.	23 0	25.0	6.0	13 0
Boise	22 5	24.5	6.0	15.0
Albuquerque, N. M.	18.5	20.5	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline Tank wag.	Serv sta.	Inc. tax	Kero. tank wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.5
Augusta	20.0	22.0	7.0	*13.0
Macon	20.0	22.0	7.0	*14.5
Savannah	18.5	20.5	7.0	*13.0
Birm'ham, Ala.	21.0	23.0	8.0	12 0
Mobile	21.0	23.0	8.0	10.0
Montgomery	22.0	24.0	9 0	14 5
Jackson, Miss.	20.0	22 0	7.0	*13.0
Vicksburg	19.5	21.5	7.0	*13.0
Jacksonville, Fla.	18.0	20.0	8.0	12.0
Miami	19 5	21.5	8.0	13 5
Pensacola	21.5	23 5	9.0	12.0
Tampa	18.0	20.0	8.0	12 5
Lexington, Ky.	19.0	21 0	6.0	11.0
Covington	18.5	20 5	6.0	10.5
Louisville	19 0	21.0	6 0	10.0
Paducah	18.0	19.0	6.0	8.5

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile and Birmingham, Ala., each have a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero tank wag
San Francisco	17.0	18 0	4.0	11.5
Los Angeles	16 5	17.5	4 0	9 0
Fresno, Calif.	17.5	18 5	4.0	11 0
Phoenix, Ariz.	21.0	22 0	6.0	‡16.0
Reno, Nev.	19.5	20 5	5.0	13.0
Portland, Ore.	19.5	20 5	6 0	13 5
Seattle, Wash.	19 :	20.5	6 0	13 5
Tacoma	19.5	20 5	6.0	13.5
Spokane	22.5	23.5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A ¼ cent per gallon discount is given dealers and customers taking tank-wagon lots except in Phoenix where discount is 1 cent ‡Includes 5-cent state tax.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Atl'tic City, N.J.	14.2	17.2	4.0	9.0
Newark	14.2	17.2	4.0	7.5
Annapolis, Md.	15.4	19.1	5.0	10.0
Baltimore	15.0	18.5	5.0	8.0
Cumberland	16.6	20.1	5.0	12.7
Wash'g'n, D. C.	13.0	16.5	3.0	9.0
Danville, Va.	17.5	21.0	6.0	13.9
Norfolk	16.0	19.5	6.0	11.3
Petersburg	16.5	20.0	6.0	11.7
Richmond	16.5	20.0	6.0	11.7
Roanoke	17.5	21.0	6.0	13.9
Charles'n, W.Va.	15.8	19.3	5.0	12.0
Parkersburg	15.1	18.6	5.0	11.3
Wheeling	16.0	19.5	5.0	12 2
Charlotte, N. C.	18.7	22.2	7.0	12.9
Hickory	19.0	22.5	7.0	13.1
Mt. Airy	19.0	22.5	7.0	13.2
Raleigh	18.4	21.9	7.0	13.7
Salisbury	18.8	22.3	7.0	13.0
Charleston, S. C.	17.0	20.5	7.0	11.3
Columbia	18.2	21.8	7.0	12.6
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: †Undivided dealers at regular price less one-half cent †discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero tank wag.
Omaha	18.4	20.4	6.0	10.4
McCook	19.1	21.1	6.0	11.1
Norfolk	18.5	20.5	6.0	10.5
North Platte	19.2	21.2	6.0	11.2
Scottsbluff	19.9	21.9	6.0	11.9

Note: Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 3½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by Standard Commercial Consumers Contract, effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Philadelphia, Pa.	16.5	17.5	5.0	9.5
Pittsburgh	17.5	19.5	5.0	10.0
Allentown	17.0	17.0	5.0	9.5
Erie	17.5	18.5	5.0	8.0
Scranton	16.75	16.0	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	17.0	5.0	10.0
Wilmington	16.5	16.5	5.0	9.5
Springf'ld, Mass.	14.0	17.5	4.0	7.5
Worcester	13.5	17.0	4.0	7.75
New Haven	13.0	16.5	4.0	7.5
Hartford, Conn.	14.5	18.0	4.0	7.0
Providence, R. I.	12.0	16.5	3 0	7.25

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO OF LOUISIANA

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
N. Orleans, La.	18.5	22.0	‡9.0	13.0
Baton Rouge	17.5	21.0	†7.0	11.5
Alexandria	18.5	22.0	††8.0	11.0
Lafayette	19.0	22.5	‡*8.0	12.5
Lake Charles	19 0	22 5	††8.0	11.0
Shreveport	17.0	20.5	†7.0	10.0
Knoxville, Tenn.	21.0	24.5	8.0	14.0
Memphis	19.0	22.5	8.0	11.0
Chattanooga	20.5	24.0	8.0	11.5
Nashville	20.0	23.5	8.0	10.0
Bristol	18.75	21.5	8.0	14.5

*Includes city tax of 1 cent.

†Includes 1-cent parish tax. ‡Includes 3-cent parish tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Post deal	Serv. sta.	Inc. tax	Kero tank wag.
Albany, N. Y.	14.0	17.5	5 0	7 75
*Met. N. Y.:				
Manhtn., Bronx	14.2	19.2	5.0	7.25
Staten Island	14.2	19.2	5.0	7.25
Qu'ns & Br'klyn	14.2	19.2	5.0	7.25
Buffalo	14.5	18.0	5.0	8.25
Rochester	14 5	18.0	5.0	8.25
Syracuse	14.5	18.0	5.0	8.75
Boston, Mass.	12.5	16.0	4.0	7.5
Portland, Me.	14.5	18.0	5.0	7.75
Manch'ter, N. H.	15 0	18.5	5.0	8 0
Burlington, Vt.	17.0	20.5	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Dallas, Tex.	13.5	17.0	5.0	5.5
Fort Worth	13.5	17.0	5.0	5.5
Houston	13.5	17.0	5.0	5.5
San Antonio	13.5	17.0	5.0	5.5
El Paso	15.0	19.0	5.0	8.0
Muskogee, Ok.	15.0	19.0	5.0	8.0
Okla. City	15.0	19.0	5.0	8.0
Tulsa	15.0	19.0	5.0	8.0
Ft. Smith, Ark.	15.5	19.0	5.0	8.0
Little Rock	18.0	21.5	7.5	9.5
Texarkana	14.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 3 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline Tank wag.	Serv. sta.	Inc. tax	Kero. tank wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	20.8	23.8	7.0	23.3
Winnipeg, Man.	20.3	23.3	7.0	20.7
Regina, Sask.	20.5	23.5	7.0	22.0
Saskatoon, Sask.	23.3	26.3	7.0	24.3
Edmonton, Alta.	32.7	35.7	7.0	34.3
Calgary, Alta.	20.0	23 0	7.0	21.5
Vancouver, B. C.	26.0	29.0	7.0	34.0
Montreal, Que.	19.5	22.0	6.0	17.5
St. John, N. B.	25.0	29.0	8.0	15.5
Halifax, N. S.	25.0	29.0	8.0	15.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price, undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less.

Retail Price Changes

Atlantic Refining Co., April 24, advanced station gasoline 1 cent in Pittsburgh; May 2 advanced tank-wagon gasoline .5 cent and station gasoline 1.5 cents in Philadelphia.

Magnolia Petroleum Co., April 29, advanced tank-wagon and station gasoline 2 cents in Oklahoma City; April 30 reduced tank-wagon kerosene 2 cents in El Paso.

Continental Oil Co. April 17 reduced tank-wagon gasoline 1 cent in Butte and tank-wagon and station gasoline 2.5 cents in Great Falls: April 30 advanced tank-wagon and station gasoline 1 cent in Denver and Pueblo.

Crude Price Changes

Magnolia Petroleum Co. for the first time posted a price for crude oil in Cass County, Texas, the western end of the Rodessa field, effective May 1. Starting with below 29 gravity at 86 cents per barrel it adds 2 cents for each degree upward, with 29 gravity at 88 cents and 40 gravity and over at $1.00. It is the prevailing Rodessa price.

Sun Veterans

Thirty-seven employes in the Tulsa division of the Sun Oil Co. received pins for 10 years or longer period of service during a recognition celebration held this week.

Thomas W. Parkin, superintendent, was presented a 35-year service emblem, the longest record in this section. Harry M. Johnson received a 30-year pin and E. C. Stewart, treasurer, a 25-year pin. Five employes received 20-year pins, 12 were presented with 15-year emblems and 17 received 10-year pins.

The average period of sericve of Sun Oil Co. employes is 12 years and 5 months.

Jersey Dividend

Directors of the Standard Oil Co. (New Jersey) have declared an extra dividend of 25 cents a share on the common stock in addition to the regular semiannual dividend of 50 cents, both payable June 15. A year ago directors of this company paid only the 50-cent regular dividend although on December 16, 1935, the 50 cents was supplemented with a 25-cent extra disbursement.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of May 5, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—
U. S. Motor grades:
62 octane and below ..... .05 .05¼
63-67 octane ..... .05⅝ .05⅝
68-70 octane (regular) ..... .06 .06¼
60-62 400 grades:
62 octane and below ..... .05 .05½
63-67 octane ..... .05⅝ .05⅝
68-70 octane (regular) ..... .06 .06¼
64-66 375 ..... .05¼ .05⅝
68-70 360 ..... .05¼ .05½

NORTH TEXAS—
U. S. Motor grades:
62 octane and below ..... .05 .05¼
63-67 octane ..... .05⅝ .05⅝
68-70 octane (regular) ..... .06 .06¼
60-62 400 ..... .05 .05¼
64-66 375 ..... .05¼ .05⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
U. S. Motor grades:
62 octane and below ..... .05⅝
63-67 octane ..... .06⅛
68-70 octane (regular) ..... .06⅝
60-62 400 ..... .05⅝ .06

ARKANSAS (Ark., N. La., Miss. del.)—
U. S. Motor grades:
62 octane and below ..... .05⅝
63-67 octane ..... .06⅛
68-70 octane (regular) ..... .06⅝

CHICAGO (Based on Group 3)—
U. S. Motor grades:
62 octane and below ..... .04⅝ .05¼
63-67 octane ..... .05⅛ .05⅝
68-70 octane (regular) ..... .05⅝ .06⅛
60-62 400 grades:
62 octane and below ..... .05 .05¼
63-67 octane ..... .05⅛ .05⅝
68-70 octane (regular) ..... .05⅝ .06¼
64-66 375 ..... .05¼ .05⅛
68-70 360 ..... .05¼ .05⅝

PENNSYLVANIA (inland refineries)—
58-60 U. S. Motor:
Below 60 octane ..... .05⅝
60-64.9 octane ..... .07
65-70 octane ..... .07⅛
64-66 375 ..... .05⅝
68-70 350 ..... .06

CALIFORNIA (domestic movement)—
54-58 U. S. Motor ..... .05⅛ .06
58-60 400 ..... .06¼ .06⅝

EAST COAST—
U. S. Motor, below 60 octane:
*New York (Bayonne) ..... .06⅝
Baltimore ..... .06⅝
U. S. Motor, 60-64.9 octane:
*New York (Bayonne) ..... .07
Philadelphia ..... .07
Boston ..... .07
Baltimore ..... .06⅝
Charleston, S. C. ..... .06⅝
U. S. Motor, 65 and above:
*New York (Bayonne) ..... .07⅛
Philadelphia ..... .07⅛
Boston ..... .07⅛
Baltimore ..... .07
Charleston, S. C. ..... .07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—
U. S. Motor grades:
Below 60 octane ..... .05⅝ .05⅝
60-64.9 octane ..... .06
65 octane and higher ..... .06⅛ .06⅛

Naphtha

PENNSYLVANIA (inland refineries)—
50-52 450 (blending) ..... .05⅛
52-54 450 (blending) ..... .05⅛
54-56 450 (blending) ..... .05⅝

Natural Gasoline

OKLAHOMA (Group 3)—
Grade 26-70 ..... .02⅝ .03
Grade 18-55 ..... .03¼ .03⅛
Low vapor pressure grade:
*14 lb. v.p. (max.) ..... .03⅝ .04⅛
*12 lb. v.p. (max.) ..... .04⅝ .05

*Nominal.

NORTH TEXAS—
Grade 26-70 ..... .02⅛
Grade 18-55 ..... .03 .03⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
Grade 26-70 ..... .03⅛ .03⅛

*CALIFORNIA—
75-85 375-390 ..... .05¼ .06

Tractor Fuel

OKLAHOMA (Group 3)—
40-42 gr., 315-325 l.b.p., 110 flash, 540-550 e.p. ..... .04⅛ .04⅝
41-42 gr., 300-350 l.b.p., 110-125 flash, 500-520 e.p. ..... .04⅛ .04⅛
46-48 gr., 210-230 l.b.p., 430 max., e.p. ..... .05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—
41-43 ..... .04¼ .04⅝
42-44 ..... .04⅝ .04⅞

NORTH TEXAS—
41-43 ..... .04⅝ .04⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
41-43 ..... .04⅛ .04⅝

ARKANSAS (Ark., N. La., Miss. del.)—
41-43 ..... .04⅝ .04¾

PENNSYLVANIA (inland refineries)—
45 ..... .05⅛
46 ..... .05⅝
47 ..... .05⅝

CHICAGO (Based on Group 3)—
41-43 ..... .04⅜ .04⅝
42-44 ..... .04⅛ .04⅝

CALIFORNIA (Pac. Coast market)—
38-40 high burning test ..... .03⅛ .05

NEW YORK (Bayonne, N. J.)—
*41-43 ..... .04⅞

GULF COAST (domestic)—
41-43 ..... .03⅝

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—
No. 1 prime white, 38-42 ..... .03⅞ .04
No. 1 straw, 33-40 ..... .03⅝ .03⅝
No. 2 straw, 32-36 ..... .03⅝ .03½
No. 2 dark, 32-36 ..... .03⅛ .03⅝
No. 3, 28-32 ..... .03 .03⅛
No. 3, 15 and above, 28-32 .... .02⅝ .02⅝

NORTH TEXAS—
No. 1 prime white, 38-42 ..... .03⅝ .03⅝
No. 1 straw, 38-40 ..... .03½ .03⅝

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
No. 3, 32-36 ..... .03⅛ .03⅝

ARKANSAS (Ark., N. La., Miss. del.)—
No. 3, 32-36 ..... .03⅝ .03⅝
No. 3, 28-32 ..... .03⅛ .03⅝

CHICAGO (Based on Group 3)—
No. 1 prime white, 38-40 ..... .03⅝ .04
No. 1 straw, 38-40 ..... .03½ .03⅝
No. 2 straw, 32-36 ..... .03⅝ .03⅝
No. 2 dark, 32-36 ..... .03⅛ .03⅝
No. 3, zero to 15, 28-32 ..... .03 .03⅛
No. 3, 15 and above, 28-32 .... .02⅝ .02½

NEW YORK (Bayonne, N. J.)—
*No. 1 ..... .04⅞
*No. 2 ..... .04½
*No. 4 ..... .04¼

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—
U.G.I. gas oil ..... .02⅝ .02⅛
No. 4, 24-28 ..... .92½ .97½
No. 4, 15 and above, 24-28 ..... .77½ .82½
No. 5 ..... .70 .75
No. 6 ..... .62½ .67½
Below 18 fuel oil, industrial.. .60 .65

NORTH TEXAS—
U.G.I. gas oil ..... .02⅝ .02⅛
No. 4, 24-28 ..... .92½ .97½
No. 5 ..... .70 .75
No. 6 ..... .62½ .67½
Below 18 fuel oil, industrial .. .60 .65

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—
U.G.I. gas oil ..... .02⅝ .03
10-14 fuel oil, industrial ..... .70 .75

ARKANSAS (Ark., N. La., Miss. del.)—
10-14 fuel oil, industrial ..... .60 .65

CHICAGO (Based on Group 3)—
U.G.I. gas oil ..... .02⅝ .02⅛
No. 4, 24-28 ..... .95 .97½
No. 4, 15 and above, 24-28 .... .77½ .82½
No. 5, 18-22 ..... .72½ .75
No. 6, 10-16 ..... .62½ .67½

PENNSYLVANIA (inland refineries)—
36-40 ..... .04⅝ .04⅞

CALIFORNIA—
Los Angeles:
30-34 gas oil, per bbl. 1.00 1.20
24 plus diesel 1.00 1.25
24 plus diesel (bunkers) 1.10 1.30
12-16 (bunkers at tidewater).. .85 .95
10-16 (cargo lots) ..... .80 .95
12-17 (tankcars) ..... .70 .95
San Joaquin Valley:
10-18 (tankcars) ..... .65 .75
San Francisco:
24 plus diesel, per bbl. 1.30 1.35
24 plus diesel (bunkers) 1.35
10-16 (bunkers) 1.00

GULF COAST—
28-30 gas oil ..... .03¼ .03⅜
28-30 diesel (bunkers) 1.50
Bunkers (bulk cargoes) ..... .80
Bunker C (bunkers) ..... .90

NEW YORK (Bayonne, N. J.)—
27 plus, gas oil ..... .04⅝
28-30 diesel (lighterage 6¼ plus per bbl.) 1.65
28-30 diesel (tankers) ..... .04½
*Bunker C (to ocean-going ships in N. Y. harbor) 1.05
Industrial fuel (tankcars) .... .04

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—
Bright Stocks:
190-200 D, 15-25 ..... .21
150-160 D, 0-10 ..... .18
150-160 D, 15-25 ..... .17½
150-160 E, 15-25 ..... .17
100-110 D, 0-10 ..... .16½
Steam refined:
630 green (treated) ..... .10½
600 light green (untreated) .. .09
600 dark green (untreated) .. .06½ .07½

PENNSYLVANIA—
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 510; 540-550 flash):
10 pour test ..... .24 .24½
15 pour test ..... .23 .23½
20 pour test ..... .22 .22½
25 pour test ..... .21 .21½
Steam refined:
600 ..... .13 .13½
650 ..... .14 .14½
600 Pennsylvania flash ..... .15 .15½
630 flash ..... .17½ .18
600 Warren E filtered ..... .15 .15½

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—
Zero to 10 Cold Test:
150-3 ..... .10
180-3 ..... .11¼
180-4 ..... .10⅝
200-3 ..... .11⅝
200-4 ..... .11⅛
250-3 ..... .13⅝
250-4 ..... .13¼
280-3 ..... .14⅝
280-4 ..... .14¼
300-3½ ..... .15¼
400-3½ ..... .16
100-2 paraffin oil ..... .05⅝
15-20 Cold Test:
200-3 ..... .10⅝
200-4 ..... .10¼
240-3 ..... .12⅝
240-4 ..... .12¼
280-3 ..... .13⅝
280-4 ..... .13¼
GULF COAST—
Pale Oils:
200-3 ..... .07 .07½
300-3 ..... .07½ .08
500-3½ ..... .08½ .09
750-3½ ..... .09 .09½
1,200-3½ ..... .09½ .09⅝
2,000-4 ..... .09⅝ .10
Red Oils:
200-5-6 ..... .07 .07¼
300-5-6 ..... .07¼ .07½
500-5-6 ..... .08 .08½
750 ..... .08½ .09
1,200-5-6 ..... .09 .09½

CALIFORNIA (moving to dom. market)
Pale Oils:
100-2½-3 ..... .06½ .06⅝
200-2½-3 ..... .06⅝ .07
300-3-3½ ..... .07 .07½
400-3-4 ..... .09 .09½
450-3-4 ..... .09⅝ .10
550-3-4 ..... .10 .10½
600-3-4 ..... .10¼ .10½
Red Oils:
200-4-5 ..... .06½ .06⅝
300-5-6 ..... .06⅝ .07
350-5-6 ..... .07 .07½
400-5-6 ..... .08 .08¼
450-5-6 ..... .08¼ .08½
500-5-6 ..... .08½ .08⅝
600-5-6½ ..... .09 .09½
700-6½ plus ..... .09½ .10
750-6½ plus ..... .10 .10¼
900-6½ plus ..... .10¼ .10½

PENNSYLVANIA—
150 vis. at 750° F., color, 400-405 flash:
Zero pour test ..... .19 .19½
10 pour test ..... .18 .18½
15 pour test ..... .17½ .18
25 pour test ..... .16½ .17
180 vis. at 70° F., 3 color:
25 pour test ..... .19½ .20
200 vis. at 70° F., 3 color:
Zero pour test ..... .22 .22½
10 pour test ..... .22 .22½
15 pour test ..... .21½ .22
25 pour test ..... .20½ .21

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—
124-126 (a.m.p.) w.c. scale .... .02¾

PENNSYLVANIA (inland refineries)—
122-124 (a.m.p.) w.c. scale .... .0255 .0260
124-126 (a.m.p.) w.c. scale .... .0260 .0265

NEW YORK—
Wax in bags fully refined:
123-125 (a.m.p.) wax ..... .0445
125-127 (a.m.p.) wax ..... .0455
128-130 (a.m.p.) wax ..... .0480
130-132 (a.m.p.) wax ..... .0505
133-135 (a.m.p.) wax ..... .0525
135-137 (a.m.p.) wax ..... .0560
124-126 (a.m.p.) w.s. ..... .0240 .0250
124-126 (a.m.p.) y.s. ..... .0240 .0245
Petrolatum in barrels, carload lots:
Dark green ..... .01⅞
Amber ..... .02⅞ .03
Extra amber ..... .03 .03⅛
Lily white ..... .06⅝ .06⅝
Snow white ..... .07⅝ .07⅞
Cream ..... .05⅝ .05⅝

Export Prices

GASOLINE

GULF COAST—
U. S. Motor ..... .05⅝ .05⅛
60-62 400 ..... .05⅛
61-63 390 ..... .05⅝
64-66 375 ..... .05⅝

LOS ANGELES—
U. S. Motor grades:
52-55 octane ..... .04¼
55-56 octane ..... .04¼ .04½
65-67 octane ..... .04½ .04⅝
67-69 octane ..... .04⅝ .05
Above 69 octane ..... .05 .05¼
65 and above 400 e.p. ..... .05¼ .05⅝

KEROSENE

GULF COAST—
41-43 prime white ..... .03⅞
41-43 water white ..... .04
44 water white ..... .04¼

LOS ANGELES—
41-43 water white ..... .04¼ .04⅝

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbls.)—
Cylinder Stocks:
600 Warren E ..... .21 .21½
600 S.R. unfiltered ..... .19 .19½
650 S.R. unfiltered ..... .19½ .20
600 flash S.R. ..... .20½ .21
630 flash S.R. ..... .23½ .24
Bright Stocks:
8 color ..... .26½
6½ plus color in dilution .... .26

NEUTRAL OIL

200-3 color ..... .26½ .27
150-3 color ..... .22½ .23

PARAFFIN WAX

NEW YORK (prices per pound)—
123-125 a.m.p. ..... .04125
125-127 a.m.p. ..... .0425
128-130 a.m.p. ..... .0450
133-135 a.m.p. ..... .0525
135-137 a.m.p. ..... .0550
Crude scale:
124-126 w.s. ..... .0260 .0270
124-126 y.s. ..... .0240 .0245

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gypsy Oil Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.28
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light *†	1.28
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1936)*	.78
Hogback, N. Mex.*	1.21
Pondera, Mont.* (Jan. 29, 1936)	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Dec. 1, 1933)‡	.75
Maljamar, N. Mex. (Sept. 29, 1933)‡	.75
Fort Collins and Wellington, Colo.‡ (Jan. 9, 1936)	See Note
Florence, Colo.	.95
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.85
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont.	1.25
Cat Creek, Mont.	1.28
Cut Bank, Mont. (May 23, 1934)	1.45

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are now posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 34°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Southwest Texas

(January 9, 1936)

Saxet	$ .90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duvall by Texas Co.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)	1.23
Midland, Mich. (Jan. 13, 1936)*	1.32
West Branch, Mich. (Jan. 14, 1936)	1.16
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Pure Oil Co. and Simrall Corp. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La. (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$.75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East Field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana. El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.42
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.41
Includes Titusville district.	
Group C	2.40
Includes Turkey and Tidioute districts.	
Group D	2.39
Includes Bear Creek and Porkey districts.	
Group E	2.36
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	
Price depends on lengths of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clear naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.65

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$ .82

*F.o.b. ship, based on February transactions and exclusive of production and export taxes and bar dues.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.88	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.92	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.15
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.13
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.13
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.13
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

Texas Hearing

AUSTIN, Tex., May 4.—The Railroad Commission today called a statewide oil and gas proration hearing May 14 to consider evidence for revision of allowable schedules and other regulations.

The June nominations will be considered, with estimates of the bureau of mines.

STANDARD OIL CO. OF CALIFORNIA

Crude oil prices at the well effective March 7, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills	Buena Vista Hills Midway-Sunset except Lakeview Area	Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.65	$.70	$.65	$.70	$.70	....	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.65	.70	.65	.70	.70	....	....
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.66	.74	.66	.74	.71	$.70	....
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.85	.78	.82	.77	.80	....	.70	.68	.78	.68	.78	.72	.70	....
21-21.9	.88	.79	.74	.88	.92	.92	.88	....	....	....	.91	.80	.85	.77	.84	$.76	.72	.71	.82	.71	.82	.74	.70	....
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.74	.87	.74	.86	.78	.72	....
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.77	.92	.77	.90	.82	.76	....
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.80	.97	.80	.94	.86	.79	....
25-25.9	1.03	.95	.82	1.02	1.05	1.11	1.03	.92	.83	....	1.02	.95	....	.89	.99	.86	.88	.83	1.01	.83	.98	.90	.83	....
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.96	.86	....	1.05	.98	....	.92	1.03	.90	.91	.86	1.06	.86	1.02	....	....	....
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.02	.88	....	....	1.02	....	.96	1.06	.95	.95	.88	1.10	.88	1.06	....	....	....
28-28.9	1.14	1.10	.99	1.14	1.16	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	.91	1.15	.91	1.10	....	....	....
29-29.9	1.17	1.16	.93	1.16	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	.94	1.20	.94	1.14	....	....	....
30-30.9	1.21	1.19	.96	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	.97	1.25	.97	1.18	....	....	....
31-31.9	....	....	....	....	....	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	.99	1.30	.99	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.26	1.16	1.13	1.02	1.34	1.02	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.04	1.38	1.04	....	....	....	$1.19
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	....	....	1.23
35-35.9	....	....	....	....	....	....	....	1.42	....	1.36	....	....	....	1.25	....	1.29	....	....	....	....	....	....	....	1.27
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	....	....	1.31
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	....	....	1.36
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	....	....	1.39
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	....	....	1.43
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River and Round Mountain 70 cents for all grades. Kern Front 70 cents for all grades.

Market Record of Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforsheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1936 High	1936 Low	Week ended May 2 Sales	Week ended May 2 High	Week ended May 2 Low	Week ended May 2 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	2,400	105	98	98	Amerada Corp.	788,675	N.P.	50cQ	4-30-36	$2.00	80	48½	55⅝	39
35⅛	27⅛	20,000	30¾	27¾	29	Atlantic Refining	2,664,904	$25	25cQ	3-16-36	1.00	28	20½	35¼	21½
20	14⅛	30,600	17⅞	16½	16⅞	Barnsdall Corp.	2,131,090	$5	15cQ†	5-1-36	‡.20	14¾	5⅞	10	5⅞
21⅝	14	84,900	18¼	16½	17⅛	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅝	19¼	6⅝
15¼	11½	69,500	13	11½	12	Consolidated Oil Corp.	13,983,287	N.P.	25c	4-7-36	.25	12¼	6½	14¼	7¼
38½	29⅛	32,000	32	29½	31⅝	Continental Oil of Delaware	4,682,671	$5	25c	4-30-36	.62½	35	15⅛	22¾	15¾
34⅝	22	10,300	29⅛	24	25	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11¾	23½	12
12¼	6⅜	32,900	9⅛	7⅝	8¼	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
23	17¼	17,100	20⅜	17¼	19⅜	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14¾	9⅛
40	19⅞	5,000	32½	30⅝	31¾	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12½	24,000	13¾	12⅝	13⅛	Ohio Oil Co.	6,563,377	N.P.	15cSA	12-14-35	.30	14¼	9¼	15⅞	8½
18	11¾	3,700	13⅝	11¾	12¾	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6¾	9⅝	5½
4¼	1⅜	2,900	2⅞	2½	2¾	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅜	38⅛	38,100	44⅝	40½	42	Phillips Petroleum	4,152,836	N.P.	50cQ¶	6-1-36	1.25	40	13¾	20¾	13⅜
16½	11⅞	7,700	15	13½	13¾	Plymouth Oil Co.	1,050,000	$5	25c	3-30-35	.25	13	6½	16¾	7¼
24⅞	16⅝	66,900	20¼	17⅞	18⅝	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
57	48⅜	600	55	53⅜	53⅜	Royal Dutch N. Y. shares	fl. 503,642,000	fl. 100	$1.70	8-1-35	1.70	48½	29½	39⅛	28⅝
43⅝	32¼	7,100	35	32¼	33½	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	6-15-36	1.00	36⅞	20¾	38⅝	20¾
19¼	14¾	18,000	16¾	14¾	15½	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
120	110½	1,700	115¼	114¼	115¼	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	111	63½	89	57
6¾	4⅝	1,900	4¾	4⅝	4¾	Simms Petroleum	461,698	$10	1.00 liq.	1-27-36	11.75 liq.	18⅝	4¾	17⅛	7¼
31½	19½	5,000	26	24	24½	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	13	73,500	14⅛	13	13½	Socony-Vacuum	31,151,075	$15	20cSA	3-16-36	.30	15¾	10⅝	19⅞	12½
47⅝	37¼	38,300	40⅜	37¼	37¾	Standard Oil of California	13,014,754	N.P.	25cQ†	6-15-36	1.00	41⅛	27¾	42⅞	26½
40⅛	32¾	32,000	36⅛	33	35	Standard Oil (Indiana)	15,215,677	$25	25cQ	3-16-36	1.00	33⅜	23	32¾	23¼
30	25	No sales ..	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	....	32	20	41	26
70	51⅛	85,400	63⅛	55⅞	58⅝	Standard Oil of New Jersey	25,856,081	$25	75cSA¶	6-15-36	‖1.25	52⅜	35¾	50⅛	39¼
91	72	1,000	80	76	77½	Sun Oil	1,733,013	N.P.	25cQ	6-15-36	$1 & 7% Stk.	77	60½	74¾	51½
39½	28⅞	33,700	35	31⅝	33¾	Texas Corp.	9,340,069	$25	25cQ	4-1-36	1.00	30¼	16½	29⅝	19⅝
15¼	7½	13,600	10¾	9	9¾	Texas Pacific Coal & Oil	880,708	$10	....	12-31-29	....	9¼	3¼	6½	2½
19⅛	14¾	23,100	17½	15½	16⅝	Tide Water Associated	5,642,342	N.P.	15cQ	6-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	1,400	105¾	104	104	Tide Water Associated pfd.	626,221	$100	$1.50Q	4-1-36	$6.50	104½	84	87	64½
28½	20⅞	15,500	23¾	20⅞	22¾	Union Oil of California	4,386,070	$25	25cQ	5-9-36	1.00	24	14¾	20½	11½
31⅝	22⅝	1,100	25	24¼	25	Union Tank Car Co.	1,200,000	N.P.	30cQ	3-2-36	1.20	26½	20⅞	25¾	15⅝
5¼	2¾	29,400	4½	3⅝	3¾	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3⅛	1	5¾	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras.

Market Record of Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforsheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1936 High	1936 Low	Week ended May 2 Sales	Week ended May 2 High	Week ended May 2 Low	Week ended May 2 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
20¼	13¼	3,300	17	15½	16	Bridgeport Machine Co.	150,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	⅛
50	39¾	300	41	41	41	Buckeye Pipe Line Co.	200,000	$50	75cQ	6-15-36	$3.00	42½	30½	38	26
4⅞	2½	24,100	4⅝	3⅝	3⅞	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1⅛
124¾	110	100	113	110	110	Chesebrough Mfg. Co.	120,000	$25	$1Q†	3-31-36	6.50	157	115	150	116
7⅜	3	112,400	5	4¼	4⅝	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4	1⅛	7,000	2⅝	2¼	2⅜	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	⅛
4⅛	1½	5,600	2¾	2⅛	2⅜	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34⅞	19⅞	23,700	28¼	25⅞	27⅛	Creole Petroleum	6,974,356	$5	20c	12-31-35	.20	23¾	10	14⅜	9⅝
12	9	500	11	10	11	Darby Petroleum	500,696	$5	25cSA	1-15-36	.50	8⅞	4	7½	4⅛
4⅝	1⅞	400	3½	3⅜	3⅜	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	¾	2¼	1
44	39	100	39½	39½	39½	Eureka Pipe Line	50,000	$50	$1Q	5-1-36	4.00	38	33¼	37	30
98	72	10,100	85½	77¾	85	Gulf Oil Corp.	4,538,101	$25	25c	4-1-36	....	74¾	50¼	76¾	49¾
76½	62½	6,500	65⅝	62¾	65½	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	4-1-36	1.25	64	44	49½	33¼
24½	20	18,100	22¾	20½	21¼	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	12-2-35	1.25	22½	15⅜	17⅞	12⅝
9¼	5½	400	7	6¾	6¾	Indiana Pipe Line	300,000	$10	20cSA	5-15-36	.35	6½	3⅝	6⅞	2⅝
39⅝	33½	11,900	37⅝	35⅝	36½	International Petroleum	14,247,088	N.P.	$1.25†‡	12-2-35	2.50	39¾	28	33⅜	19⅝
15⅛	9⅞	45,600	14	11⅝	13	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	3-16-36	.10	11⅝	4⅜	5	2⅛
15	7⅜	8,000	12⅛	11⅝	11⅞	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	8¼	3½	6	3⅜
14¼	9⅞	7,600	12⅝	10½	11¼	Lone Star Gas	5,382,723	N.P.	20cSA	2-15-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	3,100	6	5½	5¾	Mountain Producers	1,682,182	$10	30cSA	12-31-35	.90	5¾	4⅛	5½	4
23	18⅝	3,800	20¼	18⅝	18⅝	National Fuel Gas	3,810,183	N.P.	25cQ	4-15-36	1.25	20	11¾	18⅛	13⅛
15¾	10	1,400	10⅝	10	10⅝	National Transit	500,000	$12.50	35cSA	12-16-35	.75	10⅝	6¾	9½	7
4½	2⅞	2,200	3¼	3	3⅛	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1¾
6⅝	1⅝	2,100	4	3¾	4	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
6¼	4½	200	5½	5¼	5½	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4¾	3
9¼	6¾	800	7⅜	6¾	6¾	Northern Pipe Line	120,000	$10	25cSA	2-2-36	.50	8	5¼	7	4⅝
6½	3¼	147,000	6½	5	6¼	Pantepec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4½	1,800	15⅝	14	15	Root Petroleum Co.	336,045	$1	....	.....	....	5	1½	....	....
4⅜	1⅞	4,100	3½	3¼	3¼	Ryan Consolidated	296,931	N.P.	....	.. ...	....	2½	⅝	3⅜	⅞
10	7	1,800	7¾	7⅛	7½	Salt Creek Producers	1,496,859	$10	40cSA	12-31-35	1.20	7½	5½	7⅞	5½
40½	32½	700	36¼	35	35	South Penn Oil	1,200,000	$25	50c†	3-31-36	1.35	34½	21⅝	26½	17½
7⅞	4⅜	400	5½	5¼	5½	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5	3⅞	5½	3½
56	54	100	56	56	56	Southwest Penna. Pipe Lines	35,000	$50	$1Q	4-1-36	5.00	56	44¼	47	41
23⅜	17⅛	2,600	18	17⅛	17⅜	Standard Oil of Kentucky	2,604,790	$10	25cQ	3-16-36	1.25	24	18	18⅜	14⅝
14⅝	11½	600	12⅛	12	12	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7¾	16⅞	8¼
36¼	21⅜	4,900	31½	28	29⅝	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	23⅝	11½	28½	12¼
5	2⅝	43,700	5	4⅛	4⅝	Sunray Oil	1,610,810	$1	....	4-15-31	....	2⅞	⅞	2	11
9¾	6	3,800	6⅝	6	6¼	Texon Oil & Land	336,028	N.P.	15cQ	3-31-36	.60	6¼	5	11	4⅜
7½	4⅜	4,300	5⅛	4⅜	4⅞	Texas Gulf Producing Co.	888,076	N.P.	....	12-29-34	....	4⅜	2½	7	3⅝

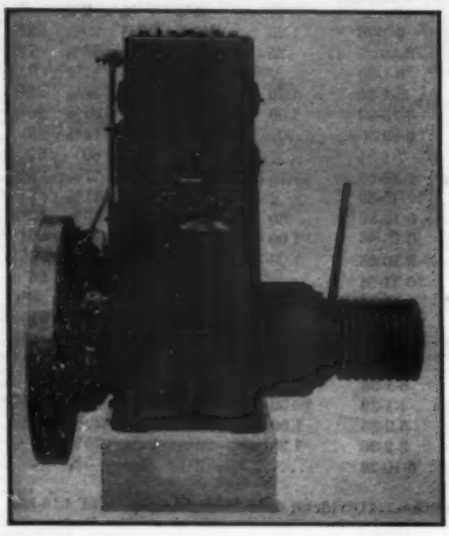
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note.—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

C-B's Vertical Pumping Engine Has Various Good Features

Rated 40 horsepower at 400 r.p.m., the type G-8D vertical 2-cycle pumping engine has been announced by the Cooper-Bessemer Corp. It is com-



pact, light and offers field-proved advancements developed over several years. It is suitable for clutch or straight pulley drive.

The builders emphasize the low installation cost, low operating cost, and low consumption of lubricating oil. They point out that only a minimum housing, or none at all, is needed. Construction features include the counterbalanced crankshaft, heavy-duty roller bearings, and modern-type crossheads.

Standard equipment on the new engine includes air-filter, water-pump, lubricating-oil pump, and lubricating-oil filter. Either a constant-speed or variable-speed governor can be furnished. Equipment for driving a radiator-fan, or for automatic air starting, is optional.

Specifications of the new engine, facts about its convertibility to oil or gas fuel, space plans, and list of field installations are available from Cooper-Bessemer district offices, or from the plants in Mount Vernon and Grove City, Pa.

Bulletins, Booklets and Other Literature for the Trade

A bulletin featuring an aftercooler of new design has been released by Ingersoll-Rand Co., 11 Broadway, New York. This aftercooler is designed to serve air and gas compressors of moderate capacities.

Rustless Iron and Steel Corp., Baltimore, Md., is mailing on request a bulletin on "Corrosion- and Heat-Resisting Stainless Steels."

The first number of "Thiokol Facts," a bimonthly publication launched by Thiokol Corp., Yardville, N. J., is being distributed. It is devoted to the general application of Thiokol, a synthetic rubber with many uses in the oil and gas industry.

The Duraloy Co., Pittsburgh, Pa., is mailing on request a four-page bulletin on Duraloy centrifugal castings.

Sullivan Machinery Co., Michigan City, Ind., announces a new bulletin on its Unitair compressor, a two-stage, completely air-cooled, V-type, single-acting stationary compressor incorporating advanced features.

The American District Steam Co., North Tonawanda, N. Y., is sending on request copies of its new looseleaf illustrated catalog No. 35 with over 120 pages of engineering, dimensional and price data on the expansion joints, meters, steam traps, pipe casing, water heaters and other steam-distribution equipment.

"'Caterpillar' Auto Patrols for Year 'Round Service" is the title of a catalog issued by Caterpillar Tractor Co., Peoria, Ill.

An 8-page catalog containing dimensions, specifications, descriptions and illustrations of Cornell rolling grilles may be obtained from Cornell Iron Works, Inc., 3600 Thirteenth Street, Long Island City, N. Y.

A 48-page catalog devoted to modern steam engines and containing helpful engineering data is offered by Troy Engine & Machine Co., Troy, Pa.

Men Widely Known in the Equipment Field

O. D. "Pete" Small, recently appointed manager of the oil industry division for Tips Engine Works, Austin, Tex., was born in the shadow of derricks in southern Ohio, and spent most of his

O. D. SMALL

early life in the oil fields of Kansas. He joined the Texas Co. in 1919, following war service, and worked two years in United States fields. In 1921 he went to Mexico for five years service with El Aguila. From 1926 to 1928 he represented West Texas Gas Co. with headquarters in Amarillo, and in 1928 went with the engineering department of the Texas Co. to the West Indies, Argentine Republic, Uraguay and Brazil, spending five years.

Allis-Chalmers Develops Line of "Ro-Twin" Compressors

Allis-Chalmers Manufacturing Co., Milwaukee, Wis., announces a new line of two-stage sliding-vane rotary air-compressors for pressures up to 100 pounds. The design is unique in that both stages as well as the intercooler, are contained

in a single casing. This new type of compressor is designated the "Ro-Twin." It offers the advantages of reduced length and floor space, less weight, only one stuffing-box and one coupling, no external air piping between stages to keep tight and a simpler lubrication system. Having only two bearings, and one flexible coupling, alignment is easily maintained. The air delivery is free from pulsations and the operation smooth, quiet and vibrationless.

The design is made possible through employment of the wear-eliminating "floating rings" which have been a feature of Allis-Chalmers sliding-vane rotary compressors and vacuum pumps.

Carboseal Is Designed to Solve Gas Distribution Problems

Carboseal, a product announced by Carbide & Carbon Chemicals Corp., 30 East Forty-second Street, New York, is designed to solve two major problems in gas distribution systems, corrosion and dehydration. The Carboseal process was developed on the theory that the dust problem and the problem of unaccounted gas losses through joint leakage could be met if the walls of the main and the joint packing could receive an internal bath with a liquid composition capable of permanently coating the inside of the main and of moistening and swelling the jute packing to its original volume.

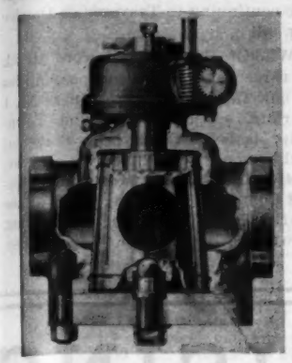
According to the manufacturers the Carboseal process performs two functions: (1) Expands the jute packing and seals the joints against leakage, thus reducing unaccounted gas losses and leakage complaints. (2) Reduces corrosion, lays the dust caused by corrosion scale and diminishes pilot outages. A low vapor pressure, marked hygroscopicity and the action of the liquid in swelling the jute are said to make Carboseal effective.

New Safety Transformer

A new type of transformer has been developed by the Acme Electric & Manufacturing Co. of Cleveland, Ohio, to increase the safety factor in inspection or maintenance service. This unit is particularly designed for use in plants or in service where inspections or maintenance requires electric illumination and in moist or damp places in buildings permeated with explosive vapor or fumes. The use of this unit around any machinery, boilers, tanks, etc., reduces the potential shocking or explosive hazards. The Acme safety transformer is a compact, portable unit. A primary cord, rubber-covered, may be plugged into any 110-volt 60-cycle circuit. The two secondaries, to which extension cables are attached, each consist of vulcanized approved cable with special nonpullout-plugs. An ordinary pull on the extension will not break the circuit. Secondary current is rated at 32 volts.

Merco Nordstrom Offers New Valve for Drilling Through

A new round-opening cast-alloy steel valve for use in connection with well-heads and christmas-trees has been developed by Merco Nordstrom Valve Co., Pittsburgh, Pa., manufacturer of Nordstrom lubricated valves. It is used primarily as a master control valve and for drilling-through service on oil wells. This advanced design is known as the Round Opening Hypreseal valve. Developed for high pressures and positive shutoff, the port is large enough to permit passage of drilling tools and tubing. The interior of the valve, when open, presents a smooth, continuous surface, permitting unrestricted flow and avoiding channeling. Present sizes include 6- and 7-inch. The 7-inch weighs approximately 2,300 pounds and is tested to 6,000 pounds pressure. The body is made of Nordco cast steel, which has a high tensile strength and the plug and stem are alloy steel.



In this round-opening valve the plug is inverted. Seating of the plug is effected by means of one steel ball adjusted through an impervious sealing diaphragm by one single screw. The single heavy-duty ball bearing affords positive, accurate thrust without distortion or unbalanced load. The shank, which takes a great portion of the load, is threaded into the valve body and has a multiple-pressure lubricant seal to prevent leakage through threads.

New D-C Analyzer Makes Test With Minimum Connections

A new self-contained d-c industrial analyzer for making practically any type of d-c voltage, current or resistance test with minimum connections, is announced by Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. The unit is particularly suited for testing industrial motors and control, and consists of an ammeter and a volt-ohmmeter with suitable shunts, multipliers and range changing switches all mounted in a compact case ready for use.

Uses of the d-c analyzer include: (1) Testing d-c motors of 150 volts to 750 volts and of 4 amperes to 750 amperes. A horsepower range of one-half to 600 horsepower. A low range (0-15) volt scale is included for drop tests, etc. Also a 50 millivolt scale for use with external shunts. (2) Motor application checking and determination from one-half horsepower to 600 horsepower. (3) Trouble shooting in motors, control apparatus, elevators, mine locomotives and d-c power generating and distribution apparatus.

Here and There With Men Who Manufacture Equipment

The Bridgeport Machine Co., Wichita, Kans., has opened an eastern and export office in suite 2112, R.C.A. Building, 30 Rockefeller Plaza, New York. Ralph Hague is in charge.

Rector Well Equipment Co., Fort Worth, Tex., is now represented in Tulsa by W. C. Morgan, 310 Thompson Building.

General Refractories Co., Philadelphia, Pa., has appointed Braman, Dow & Co., Boston, Mass., as dealer agent in the Boston area.

The Pittsburgh Equitable Meter Co. and its subsidiary, the Merco Nordstrom Valve Co., have added K. G. Myrberg and Ray Jerge to their sales force. E. H. (Ernie) Adams, chemical engineer, has joined these companies and will have his headquarters in the Los Angeles office.

Crane Co., Chicago, has appointed George L. Erwin, Jr., assistant to P. R. Mork, vice president in charge of sales. Mr. Erwin, a Cornell graduate, will develop sales and market research activities.

S. T. McKenzie has joined the field sales organization of S. R. Dresser Manufacturing Co., Bradford, Pa. Mr. McKenzie has wide experience in the sale of valves, pipe joints and allied products. His work will be confined largely to the New England states.

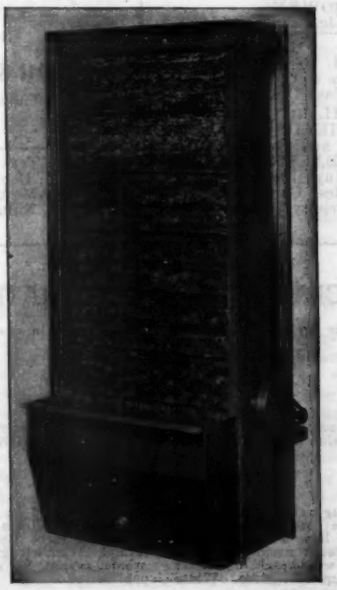
Three new distributors for Republic Steel Corp. products have been appointed. Equitable Equipment Co., Inc., New Orleans, La., will distribute Enduro stainless steel. York Corrugating Co., York, Pa., and Sheet Metal Manufacturing Co., Inc., Stamford, Conn., have been named Toncan iron sheet distributors.

Chas. M. Bailey Co., Inc., 342 Towne Avenue, Los Angeles, has been appointed representative of the James P. Marsh Corp. in the sale of valves, gauges, thermometers and industrial instruments.

Protectometer Air-Line Filter Insures Clean Air Supply

Protectomotor air-line filters, manufactured by Staynew Filter Corp., 25 Leighton Avenue, Rochester, N. Y., are made on the dry filtration principle. The medium used is a felt-like material, especially prepared for the purpose. This new type of filter, for compressors, diesel engines, vacuum pumps, ventilating systems, etc., is said to assure complete protection against damage from scale, dust, water, oil and other foreign matter always present in pipe lines.

Clean, dry air is necessary for the successful operation of compressed-air tools and for many mechanical and chemical processes. Air lines equipped with Protectomotor filters will deliver clean, dry air or other gases for whatever purpose required. Operation and maintenance costs are reduced for compressed-air tools by the use of these filters. The dust, grit, sand and other fine abrasives constantly circulating in unfiltered air are ruinous to the moving parts of such tools.



The air entering through the inlet at the top or side of the unit is thrown against the inner wall of the steel housing by the deflecting shield over the top of the filter proper. The downward velocity, maintained by the shield, precipitates water, oil and most of the dirt to the bottom of the unit. All remaining particles of water and oil are caught by the positive filter. The air therefore is discharged clean and dry through the outlet opening. A draincock is provided for draining the accumulated moisture and sediment.

"Mezurall" Is General-Purpose Rule Announced by Lufkin

The "Mezurall" is an all-purpose, 6-foot steel tape-rule just placed on the market by the Lufkin Rule Co., of Saginaw, Mich., manufacturer of measuring tapes, rules and precision tools.

With it, common measuring, either butt-end or hook, is done in the usual way. To take an inside measurement, one need only butt the square back

edge of the case against one side of the opening being measured, extend the blade to the other limit, and add 2 inches to the reading clearly indicated at the square opening in the case, the case being just 2 inches wide.

The end hook of this tape-rule has a short sliding action, so it automatically adjusts itself to give accurate results when hooked over any object (as handy in common measuring), also when the blade is projected against any surface (as in taking an inside or other butt-end measurement).

It may be carried in the pocket. Like all other Lufkin tape-rules the steel blade will stand unsupported, like a rule, yet also flex, like a tape. The "Mezurall" is on sale at hardware and tool stores, mill supply and engineering supply houses.

Packless Manifold Valve Has Many Uses in Oil Industry

Hannifin Manufacturing Co., 621-630 South Kolmar Avenue, Chicago, announces a new and improved type of "packless" manifold type air control valve, of compact construction and arranged for simple piping installation. The base is one piece, with inlet and exhaust ports at the ends and cylinder ports in the bottom. Piping can be arranged in the simplest manner with minimum number of connections. Inlet and exhaust connections can be made at either end of the base. Manifolds can be furnished with any number of valves required. There is no packing whatever. The bronze disc which controls the air flow is ground and lapped to make a perfect seal with the seat, which is similarly finished. This is designed to prevent leakage and maintenance troubles. The disc and valve seat are restored to efficiency by relapping at infrequent intervals.

Besides its use for control of compressed air and hydraulic equipment, the manifold valve is suited to the control of fluid and gas handling and pumping operations, filling and emptying storage tanks, the transfer of material in chemical and refinery processes, and similar uses.

Belt Designed for Light Work

A transmission belt which fits into the field of light work has been announced by the New York Belting & Packing Co., 1 Market Street, Passaic, N. J. The new belt, named Beltpaco Junior, takes its place with the four other transmission belts in the company's line, namely. Beltpaco Junior was particularly designed to take care of light or fractional horsepower drives: transmission drives characterized by light tensions, small pulleys and small bearings; small machine or machine-tool drives and auxiliary drives.

Automatic Steam Control Valve

The Yarway automatic steam control valve, product of Yarnall-Waring Co., Chestnut Hill, Philadelphia, Pa., is designed for connection to the outlet or condensate end of steam heating coils in water heaters and in various types of industrial process equipment, in which close regulation of temperature is required. When so connected, this valve eliminates steam regulators and steam traps and frequently does away with pressure-reducing valves. The control may also be used on inlet end of coil.

Rocky Mountain Runs

Production estimates for the week ended May 2:

WYOMING

	Bbls.
Salt Creek	16,750
Big Muddy	1,480
Badger Basin	40
Black Mountain	30
Byron	1,120
Dallas Derby	590
Dutton Creek	40
Elk Basin	230
Ferris	20
Frannie	2,060
Grass Creek	930
Hamilton dome	700
Hudson	250
LaBarge	1,070
Lance Creek	3,320
Lost Soldier	1,330
Midway	20
Oregon Basin	1,910
Osage	590
Pilot Butte	30
Rock River	2,280
Poison Spider	60
Teapot	10
Waugh dome	170
Total Wyoming	35,030

MONTANA

Buckley-Border	40
Cat Creek	610
Cut Bank	6,060
Dry Creek	80
Kevin-Sunburst	2,440
Lake Basin	50
Pondera	1,080
Total Montana	10,360

COLORADO

Florence	220
Fort Collins and Wellington	360
Iles dome	2,810
Moffat	360
Orchard	50
Rangely	80
Tow Creek	130
Total Colorado	4,060

NEW MEXICO

Artesia	680
Cooper	3,270
Eunice	16,120
Hobbs	26,810
Hogback	200
Jal	3,290
Lea area	890
Maljamar	1,780
Monument	4,920
Rattlesnake	390
Table Mesa	80
Total New Mexico	63,430
Total Rocky Mountain region	112,880

Michigan Completions

MUSKEGON, Mich., May 5.—McClanahan Oil Co. No. 1 Lincoln National Life Insurance Co., SW SW NW section 29-12n-5w, Richland Township, Montcalm County, struck a flow of 5,000,000 feet of gas in the Michigan Stray sand, indicating a new central Michigan field. Drillers are continuing to Traverse or Dundee for oil.

Wildcat shows of oil were struck in three tests, indicating possibilities of new fields: George Hanners No. 1 Dargitz, section 20, Rolland Township, Isabella County, in Traverse; McPherson Oil Co. No. 1 Sharrar, section 11, Sumner Township, Gratiot County, in Traverse, and Wallace Markle No. 1 Opaka, section 4, Grant Township, Huron County, in Dundee.

CLASSIFIED ADVERTISING

Royalties—Production

Brokers—Salesmen

Sell in the most active area in the United States — The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Securities and Exchange Commission. Inquiries invited.

B. D. BUCKLEY

Paul Brown Bldg., St. Louis, Mo.

I BUY AND SELL oil royalties and producing wells, East Texas field. B. A. SKIPPER, Longview, Texas.

MONTHLY PAYING ROYALTIES on which we have filed SCHEDULES A with the SEC at WASHINGTON. Quoted Dealers Exclusively. W. E. COOK Suite 812, Palace Bldg., Tulsa, Okla.

FREDERICK A. SANSOME AND COMPANY
522 Fifth Avenue
NEW YORK, N. Y.
Will buy, sell or quote.
Oil Interests. Wholesale Only.

Producing-ROYALTIES-Non-Producing
Dealers Exclusively
Schedules and Engineers reports furnished
G. D. TERRIEN
412-13 Central Bank Bldg., Tulsa, Okla.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood, P. O. Box 2261, Tulsa, Oklahoma.

Offering for sale
Frio County, Texas
Royalty under Amerada Block and leases adjoining this block.
Wire or write
FRANK DOERING
Temple, Texas.

OIL Production, Royalties, Leases, Land and estimating their values, has been my work for the past 30 years, with headquarters here, but covering parts of Oklahoma and New Mexico, States of many opportunities. I offer my services and experience to investors in these lines. E. B. Reeves, Box 13, Alanreed, Gray County, Texas, or Box 475, McLean, Texas.

Royalties—Production

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

PRODUCING OIL ROYALTIES
Bought (Wholesale) Sold.
Inquiries invited from Oil Companies, Bankers, Dealers.
JOHN J. KOEHLER
20 Broad St. New York.

Orders executed for Producing and Non-Producing royalties. Write or wire requirements and receive my co-operative service.
WALTER T. SCOTT
Royalty Wholesaler
Tulsa Loan Bldg., Tulsa, Okla.

PRODUCING OIL ROYALTIES
for dealers.
H. P. BOWEN
842 Kennedy Bldg., Tulsa, Okla.

VAN POOL — EAST TEXAS
Bought — Sold — Wholesale.
W. R. Brown & Co., Inc.
14 Prospect Pl., East Orange, N. J.

PRODUCING OIL ROYALTIES
(ALL FIELDS)
Bought, Sold and Quoted.
HENRY L. BAKER CO.
715 Van Nuys Bldg.,
Los Angeles, Calif.
Telephone Trinity 7391.

Royalties—Production

ROYALTIES and leases in all fields, producing and nonproducing, Kans., Okla., Tex. Get my list before buying. JAMES R. HAYNES, Grantville, Kans.

Reputable

Eastern Broker

. . . . Now operating own Royalty Company, is interested in acquiring, through exchange of stock, or otherwise, royalty or operating Companies for consolidation.

Banking and trading connections of the highest. Submit complete details in confidence subject to recall to

Box H-262
The Oil & Gas Journal
Tulsa, Oklahoma

Van—East Texas—Louisiana Royalties
Bought—Sold.
WILLIAM MONROE LAYTON
67 Wall St., Suite 1510, New York City.

Leases—Production

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, New Mexico.

FOR SALE, OIL AND MINERAL RIGHTS, under lands in Eastern Colorado, leased in solid blocks, largely by major companies; taken after seismic surveys and core drillings. Titles clear. Get ready for the next big oil play. Warren Shamburg, Burlington, Colorado.

NEW MEXICO Oil and Gas Leases and Royalties. Also inquiries and listings wanted. F. R. WARN, Santa Fe, New Mexico.

ECTOR COUNTY Drilling Block: 960 acres short distance northwest Goldsmith pool. Sound reasons for heavy production. Wire H. B. Opp, Burnet, Texas.

LANDS, Leases, Royalties, anywhere, bought, sold. Lands, $2 acre, up. Leases 25c acre, up. Advise needs. American Investment Co., Houston, Texas.

SCOUT reports furnished on any Panhandle Oil Property, with my ideas of values, etc. Price $5.00 and up. Scouting in New Mexico and Oklahoma after May the 15th. E. B. Reeves, Box 475, McLean, Tex.

10-ACRE LEASE for sale at prevailing prices, one quarter mile from C. A. Parker's discovery well Shelby County, Tex. J. D. Taylor, DeSoto Hotel, New Orleans, La.

SAN JUAN Basin, New Mexico, Offering 320 acres top of structure including Midwest Discovery well, high gravity oil 1,000 feet; wonderful deal for developer or promoter.
Roy G. Barton, Box 191, Clovis, N. Mex.

10,000 Acre Lease for Sale—5-year paid up in Schleicher County, Texas. Big drilling campaign just getting under way, one 12,000,000 foot gasser completed, two wells now drilling, two more to start soon, Address H. B. Opp, Burnet, Tex.

FOR SALE—40,000 acres oil leases in Kit Carson, Cheyenne and Kiowa Counties, Colo., 10 yr. leases 25c per acre rental, rentals paid for 1 yr. I furnish leases anywhere in Colo. or Kans. A. P. Tone Wilson, Burlington, Colorado.

WILL SACRIFICE FOR $50
A 40 acre Oil and Gas Lease in Chaves County, New Mexico. This long shot may come in and make you all the money you will ever need. Write me for particulars. Wm. Field, 413 Maple Street, Bellingham, Washington.

DRILLING BLOCK Young County, Texas, 100 acres top of structure; 750 ft. first oil sand; 40 gravity oil; cheap drilling near producing wells.
Roy G. Barton, Box 191, Clovis, N. Mex.

SHELBY COUNTY at last has a producing well. Several tests now going down. This County has been worked out and approved by best geologists. Have 1000 acres on structure for drilling contract. Small bonus. C. A. Parker, Box 451, Center, Texas.

Drilling Block—3,000 acres in Texas Permian Basin. On line between two shallow pools; Humble holds two large blocks in close proximity. Address H. B. Opp, Burnet, Texas.

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	*1 time*	*$5.00*
1 Inch	*13 times*	*4.50 per inch*
1 Inch	*26 times*	*4.00 per inch*
1 Inch	*52 times*	*3.50 per inch*

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY

CLASSIFIED RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	*$1.05*	*$1.80*	*$2.25*	*$3.30*	*7 Lines*	*$2.45*	*$4.20*	*$5.95*	*$7.70*
4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Special Offering of Pumps

We are offering a miscellaneous assortment of pumps which have accumulated in our stocks recently and will be sold at bargain prices for quick sale.

1—Pacific Horizontal Split Shell Centrifugal Hot Oil Pump, Size 2", capacity 215 GPM, 230 ft. hd. at 3600 RPM, double suction, water cooled jackets, steel fluid ends, type D.H.T.B. direct connected to 20 H.P., 440/220 volt, 60 cycle, 3 phase, explosion proof enclosed case, Louis-Allis 3600 RPM electric motor.

2—Pacific 8-stage solid shell pumps minimum capacity 80 bbls. per hour, 350-lb. pressure to maximum capacity 420 bbls. per hour 1000-lb. pressure, capacities calculated at 3600 RPM.

1—Byron Jackson Horizontal Split Shell Centrifugal Pump, 3x15, 4-stage Multiplex, capacity 420 GPM, 1000 ft. hd. at 1800 RPM, direct connected to 200 H.P. General Electric, type KTP, 440 volt 60 cycle, 3 phase, 1800 RPM, induction motor complete with manual control compensator, type C.R. 1034.

1—Worthington Centrifugal Pump size 5", capacity 715 GPM, 98 ft. hd. at 1160 RPM, 8" suction, direct connected to 30 H.P. General Electric type KT, 2200 volt, 3 phase, 60 cycle, 1160 RPM induction motor.

1—Worthington Duplex (piston type) Pump, size 10x12, 8" suction, 6" discharge, Serial No. 280029 direct connected to General Electric Induction Motor 25/12.5 H.P., type KT 526, 440 volts.

1—Kinney Rotary Pump, 1½" suction, 1½" discharge, 60 GPM at 1200 RPM, mounted on common base with General Electric Induction Motor, 1½ H.P., 1200 RPM, type KT 926, 440/220 volt, 60 cycle, 3 phase, No. 4719140.

1—Blackmar Rotary Pump, 6" suction, 6" discharge mounted on common base with explosion proof Louis-Allis 50 H.P., 860 RPM, type F, frame No. 505, 440/220 volt, 60 cycle, 3 phase, No. 166285 Electric Motor. Complete unit mounted on steel skids (sled type).

1—Blackmar Rotary Pump, 4" suction, 4" discharge mounted on common base with General Electric squirrel cage induction motor, 15 H.P. 900 RPM, type KT 312, 440/220 volt, 60 cycle, 3 phase, No. 2296120 electric motor. Complete unit mounted on steel skids (sled type).

EXCEPTIONAL OFFER OF KEY RETURN BEND FITTINGS

325—3½" O.D. x 8" center, plain box type return bends with projecting ear lugs to retain holding members.

BROWN-STRAUSS CORPORATION

Main Office—1446 Guinotte Ave., Kansas City, Mo.

Branches

Sapulpa, Okla. Arkansas City, Kans. Pyote, Texas

Everything in Refinery Equipment

The Altitude Refinery at Chanute, Kansas.
The Marathon Refinery at Boynton, Oklahoma
The Sinclair Refinery at El Paso, Texas.

Everything for sale in these plants. ALL of our EQUIPMENT is RECONDITIONED. Inventories on request. Pressure tanks and Hot Oil Pumps our specialty. All sizes pipe, valves and fittings.

W. C. BERRY Wire — Phone — Write H. J. GALAMBA

SONKEN-GALAMBA CORPORATION

64 North Second Street Kansas City, Kansas.

Steel Storage Tanks

We will erect latest type 55,000 bbl. all steel storage tanks at a great saving.

Over 500 tanks on hands from 500 bbls. to 80,000 bbls. Ready for delivery.

50—55,000 Bbl. tanks now being cut down, Haynesville, La. Will sell complete tanks or sheets.

Wire—Phone—Write—W. C. Berry

SONKEN-GALAMBA CORPORATION

64 North Second Street Kansas City, Kansas.

STEEL SHEETS

$\frac{1}{16}$" to ½" thicknesses in 5' x 10' or 5' x 15' sizes, guaranteed like new, any quantity for immediate shipment, 60,000 tons on hand.

WELDED STOCK TANKS

Extra Heavy, any size, delivery Kansas City, Tulsa, Shreveport, Dallas, Houston, Wichita. Wire, write or phone

THE TANK CORPORATION

64 North Second St., Kansas City, Kan. | Mayo Hotel, Room J, Tulsa, Oklahoma | P. O. Box 868, Cincinnati, Ohio

GASOLINE PLANT EQUIPMENT

3—320 h.p. Worthington 18½" x 20" Gas Engine Compressor Units;

1—30,000-gallon steel water tank mounted on 20 ft. high steel tower;

1—48' x 54' x 12' Steel and galvanized sheet iron building with Monitor type ventilation;

Other miscellaneous equipment.

SIMMS COMPANY

1000 Magnolia Bldg. Telephone 2-4612 Dallas, Texas.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

SEVERAL USED ROTARY RIGS
Spudders and Drilling Machines.
Several Steel Derricks & Rotary Equip.
J. S. Daniel, Beacon Bldg., Tulsa.

FOUR Lincoln Engine driven arc welders. A-1 condition. Stationary type. Service Co., 3732 Cedar, Cleveland, Ohio.

Financing

JAMES E. MILLER, 604 W. Seventh St., Tulsa, Okla., will aid in financial marketing problems. Fee basis.

PROSPECTUSES prepared and deals shaped up for registration or exemption under Federal Security Act. Fee basis. John Morris, Box 5411, Philadelphia, Pa.

Mailing Lists

OF ROYALTY investors by deed, guaranteed. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

Incorporations

DELAWARE CHARTERS: Complete incorporating and organizing service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Situations Wanted

Petroleum Refiner and Chemist, 10 yrs. complete plant experience with major companies. Technical training at O. U. Address P. O. Box 718, Okla. City.

GRAD. ENGR.—Seven years experience as Manager of Gas and Electric properties, additional experience testing Positive and Orifice meters, appraisal of gas properties, leakage surveys, wants position with gas or oil company. Address Box H-261, The Oil and Gas Journal, Tulsa, Oklahoma.

Patent Attorneys

REGISTERED PATENT ATTORNEYS
United States and Canada.
Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception."
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
Washington, D. C.

Equipment Wanted

WANT to buy for salvage, abandoned properties in any field or line pipe or casing on top of ground.
E. K. SUPPLY COMPANY
Ketchum Hotel, Tulsa, Oklahoma.

WANT to buy abandoned oil wells and all kinds of pipe lines. Also want to buy settled production. Submit full details and complete description and lowest price. Henry D. Evans, Evans Bldg., Borger, Tex.

Help Wanted

Engineer Wanted

Engineer experienced in designing oil field drilling equipment. Good opportunity for competent man. Give full particulars of experience and education which will be considered strictly confidential. The men in our Company are acquainted with this advertisement. Address Box H-221, The Oil and Gas Journal, Tulsa, Oklahoma.

WANTED: Sales Engineer, exclusive territory in Oklahoma on commission and $175.00 drawing account. Oil field and Industrial trade give full particulars. Address Box H-260, The Oil and Gas Journal. Tulsa, Oklahoma.

WANTED: High class salesmen for excellent Texas proposition in heavy lease and drilling campaign along Balcones play. Sec. complied with. Penn Oil Corporation, 706-12 Herskowitz Building, Oklahoma City, Oklahoma.

Business Opportunities

GEOLOGIST desires connection on percentage basis plus expenses. Highest credentials. Address Box G-823, The Oil and Gas Journal, 415 Lexington Avenue, New York City.

Ranches and Farm Lands

1430 ACRE PLANTATION IN RED RIVER VALLEY ADJOINING NEW CHEYNEVILLE OIL FIELD

This plantation is located between Cheyneville and Bunkie, La. on concrete Highway No. 71. Improved with beautiful colonial residence, set in grove of magnificent trees. It is traversed by Bayou Bouef giving perfect natural drainage. Very fertile type of Red River land that makes bale of cotton per acre, finest potato and sugar cane land. Within two miles of sugar mill.

The plantation is located only 1½ miles from new proven Cheyneville oil field where they have recently brought in many new producing wells and only one dry hole. The field is not on a salt dome and it is predicted that this plantation will be in direct line of production. Adjoining farm was leased at $35 per acre for oil and gas rights. Land within one mile has brought $100 per acre for royalty rights. Neither lease nor royalties have been sold on this farm.

Place belongs to large Insurance Company and they will either sell place as a whole, make oil lease or sell royalty. Land with 1/16th oil reservation can be sold on attractive terms at $50 an acre.

Also 100 other farms and plantations in Louisiana for sale.

THE NEELY BOWEN COMPANY
67 Madison Avenue, Memphis, Tennessee

For Sale—Maps

Oilfield and County Ownership Maps. New price list on request. Send $1.00 for map of Texas and eastern New Mexico.
ZINGERY OIL MAP CO.
Fair Bldg. Fort Worth, Tex.

SECTIONIZED map of West Texas and Southeast New Mexico. 40 x 50. 35 counties. Shows oil development. $3.00. Oil City Map Co., Fort Worth, Texas.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

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5-8—Dallas, Tex., A.G.A. Natural Gas Department, Baker and Adolphus Hotels.

13-15—Tulsa, midyear meeting, American Petroleum Institute, Mayo Hotel.

13-15—Tulsa, Natural Gasoline Association of America, fifteenth annual convention, Hotel Tulsa.

15—Tulsa, Institution of Petroleum Technologists, American Meeting, Mayo Hotel.

16-23—Tulsa, International Petroleum Exposition and Congress.

21—Tulsa, Independent Petroleum Association of America, midyear meeting.

22—Tulsa, National Stripper Well Association.

25-27—New York, A.G.A. Production and Chemical Conference.

25-28—New Orleans, La., National Association of Purchasing Agents Convention.

29-31—Dallas, Tex., National Oil Scouts Association, Baker Hotel.

June

17-20—Dallas, Tex., American Society of Mechanical Engineers.

18-19—State College, Pa., Pennsylvania Grade Crude Oil Association, thirteenth annual meeting.

June - July

29-July 3—Atlantic City, N. J., A.S.T.M., annual meeting.

September

7-12—Pittsburgh, Pa., American Chemical Society, semiannual meeting.

?—Tulsa or Oklahoma City, American Petroleum Institute, Division of Production, Mid-Continent district.

October

?—Cleveland, Ohio, American Institute of Mining and Metallurgical Engineers.

November

9-12—Chicago, American Petroleum Institute seventeenth annual meeting.